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SESSIONAL PAPERS,

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FOURTH SESSION OF THE SIXTH PARLIAMENT

OF THE



DOMINION OF CANADA.

SESSION 1890.



VOLUME XXIII.

UNIVERSITY OF TORONTO
GOVERNMENT PUBLICATIONS
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OF THE
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1. Report, Returns and Statistics of the Inland Revenues of the Dominion of Canada, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 17th January, 1890, by Hon. J. Costigan.....*Printed for both Distribution and Sessional Papers.*
- 1a. Inspection of Weights, Measures and Gas, being a Supplement to the Report of the Department of Inland Revenue, 1889.....*Printed for both Distribution and Sessional Papers.*
- 1b. Report on Adulteration of Food, being a Supplement to the Report of the Department of Inland Revenue, 1889.....*Printed for both Distribution and Sessional Papers.*

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2. Tables of the Trade and Navigation of the Dominion of Canada, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 17th January, 1890, by Hon. M. Bowell—
Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 3.

3. Public Accounts of Canada, for the fiscal year ended 30th June, 1889; presented to the House of Commons, 17th January, 1890, by Hon. G. E. Foster. Estimates for the fiscal year ending 30th June, 1891; presented 30th January, 1890. Supplementary Estimates of Canada, for the fiscal year ending 30th June, 1890; presented 27th March, 1890. Further Supplementary Estimates for the fiscal year ending 30th June, 1890; presented 25th April, 1890. Supplementary Estimates for the year ending 30th June, 1891; presented 6th May, 1890—
Printed for both Distribution and Sessional Papers.
4. List of Shareholders in the Chartered Banks of the Dominion of Canada, as on the 31st December, 1889. Presented to the House of Commons, 9th April, 1890, by Hon. G. E. Foster—
Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 4.

5. Report of the Auditor General on Appropriation Accounts, for the year ended 30th June, 1889. Presented to the House of Commons, 27th January, 1890, by the Hon. G. E. Foster—
Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 5.

6. Report of the Minister of Agriculture for the Dominion of Canada, for the calendar year, 1889. Presented to the House of Commons, 20th March, 1890, by Hon. J. Carling—
Printed for both Distribution and Sessional Papers.
- 6*. Canadian Immigration and Emigration. Annex to the Report of the Minister of Agriculture—
Printed for both Distribution and Sessional Papers.
- 6a. Criminal Statistics for the year 1888.....*Printed for both Distribution and Sessional Papers.*
- 6a*. Criminal Statistics for the year 1889.....*Printed for both Distribution and Sessional Papers.*

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- 6b.** Report on Canadian Archives, 1890. Presented to the House of Commons, 10th February, 1890, by Hon. J. Carling.....*Printed for both Distribution and Sessional Papers.*
- 6c.** Reports of the Director and Officers of the Experimental Farms, for the year 1889. Presented to the House of Commons, 9th April, 1890, by Hon. J. Carling—
Printed for both Distribution and Sessional Papers.
- 6d.** Report of the High Commissioner for Canada, with Reports from Agents in the United Kingdom, for the year 1889. Presented to the House of Commons, 9th April, 1890, by Hon. J. Carling—
Printed for both Distribution and Sessional Papers.

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- 7.** Report of the Secretary of State of Canada, for the year ended 31st December, 1889. Presented to the House of Commons, 29th January, 1890, by Hon. J. A. Chapleau—
Printed for both Distribution and Sessional Papers.
- 7a.** The Civil Service List of Canada, 1889. Presented to the House of Commons, 3rd February, 1890, by Hon. J. A. Chapleau.....*Printed for both Distribution and Sessional Papers.*
- 7b.** Report of the Board of Examiners for the Civil Service of Canada, for the year ended 31st December, 1889. Presented to the House of Commons, 30th January, 1890, by Hon. J. A. Chapleau—
Printed for both Distribution and Sessional Papers.
- 7c.** Report of the Department of Public Printing and Stationery for the Dominion of Canada, for the year ended 30th June, 1889.....*Printed for both Distribution and Sessional Papers.*
- 8.** Report of the Joint Librarians of Parliament on the state of the Library of Parliament. Presented to the House of Commons, 16th January, 1890, by Hon. Mr. Speaker—
Printed for Sessional Papers only.

CONTENTS OF VOLUME No. 8.

- 9.** Report of the Superintendent of Insurance, for the year ended 31st December, 1889—
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- 9a.** Preliminary Abstract of the business of Canadian Life Insurance Companies, for the year ended 31st December, 1889. Presented to the House of Commons, 7th February, 1890, by Hon. G. E. Foster.
Printed for both Distribution and Sessional Papers.
- 9b.** Abstract of Statements of Insurance Companies in Canada for the year ending 31st December, 1889. Presented to the House of Commons, 9th April, 1890, by Hon. G. E. Foster—
Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 9.

- 10.** Report of the Minister of Justice as to Penitentiaries in Canada, for the year ended 30th June, 1889. Presented to the House of Commons, 28th March, 1890, by Sir John Thompson—
Printed for both Distribution and Sessional Papers.
- 11.** Annual Report of the Department of Militia and Defence of the Dominion of Canada, for the year ended 31st December, 1889. Presented to the House of Commons, 6th February, 1890, by Sir Adolphe Caron.....*Printed for both Distribution and Sessional Papers.*

CONTENTS OF VOLUME No. 10.

- 12.** Annual Report of the Department of Indian Affairs, for the year ended 31st December, 1889. Presented to the House of Commons, 22nd January, 1890, by Hon. E. Dewdney—
Printed for both Distribution and Sessional Papers.
- 13.** Report of the Commissioner of the North-West Mounted Police Force, 1889. Presented to the House of Commons, 17th March, 1890, by Sir John Macdonald—
Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 11.

- 14.** Annual Report of the Department of the Interior, for the year 1889. Presented to the House of Commons, 31st March, 1890, by Hon. E. Dewdney—
Printed for both Distribution and Sessional Papers.
- 15.** Report of the Postmaster General, for the year ended 30th June, 1889. Presented to the House of Commons, 23rd January, 1890, by Hon. J. Haggart—
Printed for both Distribution and Sessional Papers.

OMISSION.

The two following documents were not printed until the Index was issued, which accounts for their omission :

6c. Abstracts of the Returns of Mortuary Statistics for the year 1889. (*Printed for both Distribution and Sessional Papers.*)

[The above paper has been inserted as the first of Volume No. 7, immediately preceding the Report of the Secretary of State.]

19b. Canal Statistics for Season of Navigation, 1889. (*Printed for both Distribution and Sessional Papers.*)

[Inserted as last paper in Volume No. 13, immediately following Railway Statistics.]

CONTENTS OF VOLUME No. 12.

- 16.** Twenty-second Annual Report of the Department of Marine, for the fiscal year ended 30th June, 1889. Presented to the House of Commons, 24th February, 1890, by Hon. Mr. Colby—
Printed for both Distribution and Sessional Papers.
- 16a.** Report of the Chairman of the Board of Steamboat Inspection, for calendar year ended 31st December, 1889 *Printed for both Distribution and Sessional Papers.*
- 17.** Annual Report of the Department of Fisheries, for the year 1889. Presented to the House of Commons, 16th April, 1890, by Hon. Mr. Colby.... *Printed for both Distribution and Sessional Papers.*
- 17a.** Special Report of the delegates appointed in 1889, to enquire into the Herring Fishing Industry of Great Britain and Holland. Presented to the House of Commons, 10th February, 1890, by Hon. C. H. Tupper *Printed for both Distribution and Sessional Papers.*
- 17b.** Report on the Fisheries Protection Service of Canada, 1889. Presented to the House of Commons, 10th March, by Hon. Mr. Colby *Printed for both Distribution and Sessional Papers.*

CONTENTS OF VOLUME No. 13.

- 18.** Annual Report of the Minister of Public Works, for the fiscal year 1888-89, on the works under his control. Presented to the House of Commons, 3rd February, 1890, by Sir Hector Langevin—
Printed for both Distribution and Sessional Papers.
- 19.** Annual Report of the Minister of Railways and Canals for the past fiscal year, from the 1st July, 1888, to 30th June, 1889, on the works under his control. Presented to the House of Commons, 3rd March, 1890, by Sir John A. Macdonald.... *Printed for both Distribution and Sessional Papers.*
- 19a.** Railway Statistics of Canada, and Capital, Traffic and Working Expenditure of the Railways of the Dominion, 1889. Presented to the House of Commons, 9th May, 1890, by Sir John A. Macdonald—
Printed for both Distribution and Sessional Papers.

CONTENTS OF VOLUME No. 14.

- 20.** Report of the Social Economy Section of the Universal International Exhibition of 1889 at Paris, prepared by Jules Helbronner, member of the Royal Labor Commission. Presented to the House of Commons, 8th May, 1890, by Hon. M. Bowell. *Printed for both Distribution and Sessional Papers.*
- 21.** Return to an order of the House of Commons, dated 20th March, 1889, for copies of all correspondence respecting the establishment of a bi-weekly, in place of a weekly, postal service between Lourdes and Somerset, in the county of Megantic. Presented to the House of Commons, 20th January, 1890.—*Mr. Turcot*..... *Not printed.*
- 21a.** Return to an order of the House of Commons, dated 25th February, 1889, for copies of all correspondence respecting the awarding of the contract for carrying the mail between Becancour Station and Ste. Julie de Somerset, and between Inverness and Ste. Julie de Somerset, awarded in or about the month of April, 1888; also of all tenders connected therewith. Presented to the House of Commons, 20th January, 1890.—*Mr. Turcot*..... *Not printed.*
- 21b.** Return to an order of the House of Commons, dated 2nd March, 1888, for a return of all correspondence by letter or telegram, and all other papers, relative to the conveyance of extra provincial mails in Prince Edward Island since the 1st of September last. Presented to the House of Commons, 20th January, 1890.—*Mr. Davies*..... *Not printed.*
- 21c.** Return to an order of the House of Commons, dated 23rd January, 1890, for a return showing the number of registered letters sent to the Dead Letter Office during the years 1887, 1888 and 1889, up to the 31st December last. Presented to the House of Commons, 29th January, 1890.—*Mr. McMullen*..... *Not printed.*
- 21d.** Return to an order of the House of Commons, dated 3rd February, 1890, for copies of all letters, reports and other correspondence now in the possession of the Postmaster General respecting the carriage of the mails between Campbellton, in the province of New Brunswick, and Gaspé Basin, in the province of Quebec. Presented to the House of Commons, 7th February, 1890.—*Mr. Joncas*..... *Not printed.*
- 22.** Statement of Governor General's Warrants issued and expenditure made under same since last session of Parliament, in accordance with Consolidated Revenue and Audit Act, section 32, sub-section 2. Presented to the House of Commons, 20th January, 1890, by Hon. G. E. Foster—
Printed for Distribution only.
- 23.** Report of the Commissioner, Dominion Police, for the year 1889, under Revised Statutes of Canada, chapter 184, section 5. Presented to the House of Commons, 21st January, 1890, by Sir John Thompson *Not printed.*

24. Statement of expenditure on account of Miscellaneous Expenses from 12th July, 1889, to 4th January, 1890, authorized by Act 52 Victoria, chapter 1. Presented to the House of Commons, 22nd January, 1890, by Hon. G. E. Foster *Not printed.*
25. Return to an order of the House of Commons, dated 8th February, 1889, for a return of the number of lobster factories round the coast of Prince Edward Island, the number of fines imposed during the season of 1888, the amount of each fine, the names of parties who have paid the fines, and the names of parties who have not paid the same; also the nature of offence in each case. Presented to the House of Commons, 22nd January, 1890.—*Mr. Perry*..... *Not printed.*
26. Copies of the regulations affecting Dominion Lands which have been sanctioned by the Privy Council since the close of last session of Parliament, in compliance with section 91 of the Dominion Lands Act, chapter 54 of the Revised Statutes of Canada. Presented to the House of Commons, 28th January, 1890, by Hon. J. A. Chapleau..... *Not printed.*
27. Regulations for the control and management of the Rocky Mountains Park of Canada, sanctioned by Order in Council of the 27th November, 1889. Presented to the House of Commons, 28th January, 1890, by Hon. J. A. Chapleau..... *Printed for Distribution only.*

CONTENTS OF VOLUME No. 15.

28. Statement of all superannuations and retiring allowances in the Civil Service, giving the name and rank of each person superannuated or retired, his salary, age and length of service, his allowance and cause of retirement, whether vacancy has been filled by promotion or new appointment, etc., for year ended 31st December, 1889. Presented to the House of Commons, 29th January, 1890, by Hon. G. E. Foster..... *Printed for Sessional Papers only.*
- 28a. Return to an address of the House of Commons, to His Excellency the Governor General, dated the 22nd January, 1890, for copies of all Orders in Council, correspondence and documents respecting the superannuation of certain employees in the Cullers' Office at Quebec. Presented to the House of Commons, 30th January, 1890.—*Mr. Langelier (Quebec Centre)*..... *Not printed.*
- 28b. Return to an address of the House of Commons, to His Excellency the Governor General, dated 22nd January, 1890, for copies of all Orders in Council, correspondence and documents respecting the superannuation of certain employees in the Post Office at Quebec, and in the Post Office Inspector's Office at Quebec; and the filling up of the vacancies caused by their superannuation. Presented to the House of Commons, 5th March, 1890.—*Mr. Langelier (Quebec Centre)*..... *Not printed.*
29. Return to an order of the House of Commons, dated 23rd January, 1890, for a return giving a detailed statement of receipts and expenditures to 1st January, 1890, together with statement of the same for the half year ending 1st January, 1889. Presented to the House of Commons, 29th January, 1890.—*Sir Richard Cartwright*..... *Printed for Distribution only.*
30. Return to an order of the House of Commons, dated 20th January, 1890, for a return showing the amounts of money deposited in the several savings banks in the Dominion, and in the several post office savings banks, the location of each, and the gross amount of deposits in each on the 30th of June and December last. Presented to the House of Commons, 29th January, 1890.—*Mr. McMullen*..... *Not printed.*
- 30a. Supplementary return to an order of the House of Commons, dated 20th January, 1890, for a return showing the amounts of money deposited in the several savings banks in the Dominion, and in the several post office savings banks, the location of each, and the gross amounts of deposits in each on the 30th of June and December last. Presented to the House of Commons, 18th February, 1890.—*Mr. McMullen*..... *Not printed.*
- 30b. Return to an order of the House of Commons, dated 5th February, 1890, for copies of the original charters of the Bank of British North America and of the Bank of British Columbia, and of all amendments thereto. Presented to the House of Commons, 21st February, 1890.—*Mr. Edgar*—*Not printed.*
- 30c. Return to an order of the House of Commons, dated 23rd January, 1890, for a return giving the names of all the chartered banks in Canada that have suspended payment, gone into liquidation, or become insolvent since Confederation, showing the amount of capital stock authorized, the amount of stock subscribed, the amount of stock paid up, the assets and liabilities of said banks at the time of such suspension or failure, the nature of such assets and liabilities, the dates of said charters and the dates of forfeiture or relinquishment of such charters, and dividend paid to bill holders and depositors. Presented to the House of Commons, 2nd April, 1890.—*Mr. Hesson*..... *Not printed.*
31. Correspondence with the Canadian Pacific Railway Company covering a copy of list of all lands sold by that company during the year ending 1st day of October last, in compliance with section 8 of 49 Victoria, chapter 9. Presented to the House of Commons, 30th January, 1890, by Hon. E. Dewdney..... *Not printed.*

- 31a.** Return (*in part*) under resolution of the House of Commons, passed on the 20th February, 1882, on all subjects affecting the Canadian Pacific Railway, respecting details as to: 1. Selection of the route. 2. The progress of the work. 3. The selection or reservation of land. 4. The payment of moneys. 5. The laying out of branches. 6. The progress thereon. 7. The rates of tolls for passengers and freight. 8. The particulars required by the Consolidated Railway Act and amendments thereto, up to the end of the previous fiscal year. 9. Like particulars up to the latest practicable date before the presentation of the return. 10. Copies of all Orders in Council and all correspondence between the Government and the railway company, or any member or officer of either, relating to the affairs of the company. Presented to the House of Commons, 30th January, 1890, by Hon. E. Dewdney.....*Printed for Sessional Papers only.*
- 31b.** Return to an address of the House of Commons to His Excellency the Governor General, dated 24th January, 1890, for copies of all correspondence between the Dominion Government and the Imperial Government, and between the Dominion Government and the Canadian Pacific Railway Company in regard to the granting of a subsidy to the latter company for lines of steamships to run between Vancouver, B.C., and Japan and Australia. Presented to the House of Commons, 25th February, 1890.—*Mr. Prior*.....*Not printed.*
- 31c.** Return to an order of the House of Commons, dated 29th January, 1890, for copies of all petitions, letters or other documents addressed to the Government, and complaining of the condition of the bridges on the branch lines of railway worked by the Canadian Pacific Railway Company within the county of Bagot and the neighboring counties. Presented to the House of Commons, 26th February, 1890.—*Mr. Dupont*.....*Not printed.*
- 32.** Detailed statement of all bonds or securities registered in the Department of the Secretary of State of Canada, submitted to the Parliament of Canada under section 23, chapter 19, of the Revised Statutes of Canada. Presented to the House of Commons, 3rd February, 1890, by Hon. J. A. Chapleau.....*Not printed.*
- 33.** Return to an address of the House of Commons, to His Excellency the Governor General, dated 27th January, 1890, for copies of all resolutions of the Legislative Assembly of the North-West Territories, respecting the application of moneys voted by this House for the use of the said territories. Presented to the House of Commons, 10th February, 1890.—*Hon. Mr. Laurier*.....*Not printed.*
- 33a.** Return to an address of the House of Commons, to His Excellency the Governor General, dated 3rd February, 1890, for copies of all memorials, petitions and resolutions of the Legislative Assembly of the North-West Territories passed at its last session, whether addressed to His Excellency the Governor General or to the Parliament of Canada. Presented to the House of Commons, 10th February, 1890.—*Mr. Daly*.....*Not printed.*
- 33b.** Copies of the several petitions presented to Council against the abolition of separate schools and the French language in the North-West Territories. Presented to the House of Commons, 11th February, 1890, by Mr. Colby.....*Not printed.*
- 33c.** Return to an address of the House of Commons, to His Excellency the Governor General, dated 27th January, 1890, for copies of all resolutions of the Legislative Assembly of the North-West Territories, respecting the settlement of the Half-breed claims. Presented to the House of Commons, 21st February, 1890.—*Hon. Mr. Laurier*.....*Not printed.*
- 33d.** Return to an address of the House of Commons, to His Excellency the Governor General, dated 27th January, 1890, for copies of all Orders in Council, despatches, correspondence and documents relating to the resignation of the Advisory Council of the North-West Territories, and the appointment of their successors. Presented to the House of Commons, 24th February, 1890.—*Mr. White (Renfrew)*.....*Not printed.*
- 33e.** Return to an order of the House of Commons, dated 23rd January, 1890, for a return showing, by years, the cost of printing the Ordinances and other official papers and publications in the French language from the time of the passage of the North-West Territories Act of 1877. 2. The number of copies of the Ordinances from time to time printed in said language. 3. The number distributed and the number remaining in stock. Presented to the House of Commons, 25th February, 1890.—*Mr. Denison*.....*Printed for both Distribution and Sessional Papers.*
- 33f.** Return to an order of the House of Commons, dated 24th February, 1890, for a copy of the memorials sent by Joseph Holden and John Shera to the Hon. Edgar Dewdney, Minister of the Interior, respecting second homesteads in the Territories. Presented to the House of Commons, 26th March, 1890.—*Mr. Davin*.....*Not printed.*
- 33g.** Return to an Order of the House of Commons, dated 24th February, 1890, for a return showing receipts and expenses of each North-West Territories Registry Office from 1887 to 1889. Presented to the House of Commons, 26th March, 1890.—*Mr. Davin*.....*Not printed.*

- 33h.** Correspondence in relation to certain assistance afforded to the Half-breeds at Fort la Corne and other places. Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney—*Not printed.*
- 33i.** Statement respecting the purchase of seed grain (including a schedule of prices paid for wheat and oats). Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney....*Not printed.*
- 33j.** Statement respecting distribution of seed-grain and instructions as to the distribution thereof. Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney.....*Not printed.*
- 33k.** Memorandum with reference to the appropriation accounts of 1889, for certain of the provinces and the North-West Territories. Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney.....*Not printed.*
- 33l.** Statement regarding the claim of the Eau Clair and Bow River Lumber Company against the Government for lumber alleged to have been taken off their limits. Presented to the House of Commons, 1st May, 1890, by Hon. E. Dewdney*Not printed.*
- 33m.** Correspondence, etc., respecting the St. Albert Bridge. Presented to the House of Commons, 1st May, 1890, by the Hon. E. Dewdney*Not printed.*
- 33n.** Return to an order of the House of Commons, dated 21st April, 1890, for a return showing : 1. The number of acres of pasture land now under lease in the North-West Territories. 2. The amount paid the Government for rental of grazing leases during the past year. 3. The amount due the Government for arrears on pasture leases, and the names of the lessees in arrears for pasture lease rental. 4. The names of the lessees holding leases of territory upon which settlers are not allowed to take up land without the consent of the lease-holder, with the total area of such leases, and the location of each. Presented to the House of Commons, 9th May, 1890.—*Mr. Charlton*—*Not printed.*
- 33o.** List of schools under different denominations in the North-West Territories, 1889. Presented to the House of Commons, 12th May, 1890, by Hon. E. Dewdney.....*Not printed.*
- 34.** See *Sessional Paper No. 17a.*
- 35.** Certified copy of a report of the Honorable the Privy Council, approved by His Excellency in Council on the 17th August, 1889, on the subject of the Copyright Act of last session, together with correspondence and other papers referring to the same subject. Presented to the House of Commons, 10th February, 1890, by Sir John Thompson....*Printed for both Distribution and Sessional Papers.*
- 36.** Copies of reports of a committee of the Honorable the Privy Council, with reference to the granting a timber license to Mr. John Adams. Presented to the House of Commons, 17th February, 1890, by Sir John Macdonald.....*Not printed.*
- 36a.** Return to an order of the House of Commons, dated 19th March, 1890, for a list of timber limits granted by the Dominion Government since March 1st, 1885 ; the names of the parties to whom granted, with date of grant ; the area of each limit granted ; whether granted to highest bidder at public competition, and the amount of bonus, if any, in each case received. Presented to the House of Commons, 15th April, 1890.—*Mr. Charlton*.....*Printed for Sessional Papers only.*
- 37.** Return to an address of the House of Commons, to His Excellency the Governor General, dated 27th January, 1890, for copies of all Orders in Council or departmental orders prohibiting American vessels from carrying bonded freight from American ports to Victoria, British Columbia, or any other Canadian port ; and copies of all Orders in Council or departmental orders revoking the same, and all correspondence connected therewith. Presented to the House of Commons, 18th February, 1890.—*Hon. Mr. Laurier**Not printed.*
- 38.** Return to an order of the House of Commons, dated 6th February, 1889, for a return giving the total cost of issuing the budget speech each year since 1867, together with a statement showing the number of copies issued during said period. Presented to the House of Commons, 18th February, 1890.—*Mr. Landerkin*.....*Not printed.*
- 39.** Return to an order of the House of Commons, dated 23rd January, 1890, for a statement of all the expenses generally incurred to this day for the making of the electoral lists for the Dominion of Canada. Presented to the House of Commons, 25th February, 1890.—*Mr. Casgrain*—*Not printed.*
- 40.** Return to an order of the House of Commons, dated 12th February, 1890, for copies of all papers, correspondence and agreements between the Government and the proprietors of the extension of the Derby Branch Railway in relation to the said extension, the said extension having being built by the aid of Government subsidy, but never yet operated. Presented to the House of Commons, 26th February, 1890.—*Mr. Mitchell*.....*Not printed.*
- 41.** Return to an order of the House of Commons, dated 12th February, 1890, for copies of all petitions and correspondence respecting the request for the construction of a siding, on the line of the Intercolonial Railway, at the station of St. Jean Chrysostôme, in the county of Lévis. Presented to the House of Commons, 26th February, 1890.—*Mr. Guay*.....*Not printed.*

- 41a.** Return to an order of the House of Commons, dated 12th February, 1890, for a statement showing the names of all persons who sold to the Dominion Government since the 1st January, 1886, property located in St. Laurent and Lauzon Wards in the town of Lévis, with a view to widening the roadway of the Intercolonial Railway, and an extension of the station at Lévis; the amount paid to each proprietor; the amounts paid for commissions; the rate of percentage, and the persons to whom such amounts were paid. Presented to the House of Commons, 26th March, 1890.—*Mr. Guay*.....*Not printed.*
- 41b.** Return to an order of the House of Commons, dated 10th March, 1890, for copies of all petitions to the Minister of Railways since 1st January, 1889, from employees of the Intercolonial Railway workshops at Moncton and the Prince Edward Island Railway, asking for an increase of wages; and also for copies of all answers to the same from the Department of Railways or any official thereof. Presented to the House of Commons, 21st April, 1890.—*Mr. Davies*.....*Not printed.*
- 41c.** Return to an order of the House of Commons, dated 10th March, 1890, for copies of all petitions forwarded to the Government by Messrs. Nazaire Ouellet, Geo. Voyer, Alfred Ouellet, F. Côté and others, in relation to damages caused to their properties by the Intercolonial Railway. Presented to the House of Commons, 21st April, 1890.—*Mr. Fiset*.....*Not printed.*
- 41d.** Return to an order of the House of Commons, dated 10th March, 1890, for a return showing the past operation of the Intercolonial Railway employees insurance' scheme, and especially (a) the annual receipts and expenditure, including salaries of officials for each year the scheme has been in operation; (b) the amounts paid each year out of the fund to the employees or their representatives, and whether for death or injury; (c) the surplus (if any) now on hand of such fund. Presented to the House of Commons, 22nd April, 1890.—*Mr. Davies*.....*Not printed.*
- 41e.** Return to an order of the House of Commons, dated 24th February, 1890, for a return of the casualties to trains on the Intercolonial Railway, arising from collision, broken rails or otherwise, for the calendar year 1889, the respective causes and dates, the amount of damage (if any) in each case to property, the amount of compensation paid to owners of property destroyed or damaged, as well as amount of claims for loss or damage to property (if any) unsettled. Presented to the House of Commons, 22nd April, 1890.—*Mr. Weldon (St. John)*.....*Not printed.*
- 41f.** Return to an order of the House of Commons, dated 10th March, 1890, for a return showing (a) the names and number of officials' cars on the Intercolonial Railway and its branches; (b) the original cost, date and place of building of each car, or name of person or company from whom purchased; (c) the cost of repairs to, or expenditure in, each of such cars since acquired; (d) the names, salaries and expenses of each employee on such official cars; (e) the annual expenses of providing the supplies to each such car. Presented to the House of Commons, 9th May, 1890.—*Mr. Davies*—
Not printed.
- 41g.** Return to an address of the Senate to His Excellency the Governor General, dated 1st May, 1890, for a return showing: 1. The rate per ton charged for carrying coal in car loads over the Intercolonial Railway from the mines of Nova Scotia to St. John, Moncton, Newcastle and Campbellton in New Brunswick, and to Rimouski, Rivière du Loup and Quebec, and by the same, with its connections, to Montreal and Toronto. 2. The rate per ton for carrying flour, wheat and other goods of the same class in car loads from Toronto, Montreal and Quebec to Campbellton, Newcastle, Moncton and St. John in New Brunswick, and to Amherst, Truro, Pictou and Halifax in Nova Scotia. 3. The number of freight trains which passed each way between Nova Scotia and Quebec and Ontario, and between New Brunswick and the same provinces, in the year 1889. 4. How many trains carried goods from the west to be shipped at Halifax and St. John, respectively, during 1889, and up to the present date in 1890. Presented to the Senate, 16th May, 1890.—*Hon. Mr. Wark*.....*Not printed.*
- 42.** Return to an order of the House of Commons, dated 23rd January, 1890, for a return showing the amount of money expended by the Dominion in each province since Confederation to the 30th of June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault Branch. 2. The several railways built by the Dominion in each Province, including the Intercolonial branches and extensions, but not the main line as originally constructed. 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 26th February, 1890.—*Mr. McMullen*—
Printed for both Distribution and Sessional Papers.
- 42a.** Amended return (in part) to a return presented to the House of Commons on the 26th February, 1890, showing the amount of money expended by the Dominion in each province since Confederation to the 30th June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault Branch. 2. The several railways built by the Dominion in each province, including the Intercolonial branches and extensions, but not the main

line as originally constructed. 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 22nd April, 1890.—*Mr. McMullen*

Printed for both Distribution and Sessional Papers.

- 42b.** Return to an order of the House of Commons, dated 21st April, 1890, for a statement of the amount of subsidies voted to the Canada Atlantic Railway Company for the construction of their bridge over the St. Lawrence River, between Coteau and Valleyfield, the amount paid by the Government up to date, and the amount unearned or still to be paid. Presented to the House of Commons, 2nd May, 1890.—*Mr. Bergeron*..... *Not printed.*
- 42c.** Return to an order of the House of Commons, dated 21st April, 1890, for a statement of the amount of subsidies voted by Parliament to the Beauharnois Junction Railway Company, the amount paid by the Government up to date, and the amount still due or unearned. Presented to the House of Commons, 2nd May, 1890.—*Mr. Bergeron*..... *Not printed.*
- 42d.** Papers, correspondence, etc., respecting subsidies to certain railway companies, and towards the construction of certain railways, as follows: Montreal and Ottawa Railway Company (late Vaudeuil and Prescott Railway Company); Waterloo Junction Railway Company; Northern Pacific Junction Railway Company; Ottawa, Morrisburg and New York Railway Company; Erie and Huron Railway Company; Brockville, Westport and Sault Ste. Marie Railway Company; Manitoulin and North Shore Railway Company; Port Arthur, Duluth and Western Railway Company; Lake Erie and Detroit River Railway (formerly Amherstburg, Lake Shore and Blenheim Railway Company); Lindsay, Bobcaygeon and Pontypool Railway Company; Kingston, Smith's Falls and Ottawa Railway Company; Ottawa and Parry Sound Railway Company; Bay of Quinté and Lake Nipissing Railway Company; Cobourg, Northumberland and Pacific Railway Company; St. Stephen and Milltown Railway Company; Woodstock and Centreville Railway Company; St. John River Railway Company, N.B.; Central Railway Company, N.B.; Shelburne and Liverpool to Annapolis Railway Company; Inverness and Richmond Railway Company; International Railway Company; Montreal and Sorel Railway Company; Pontiac Pacific Junction Railway Company; Montreal and Lake Maskinongé Railway Company; Great Eastern Railway Company; Drummond County Railway Company; Oxford Mountain Railway Company; Maskinongé and Nipissing Railway Company; Jacques Cartier Union Railway Company; Quebec Central Railway Company; Quebec and Lake St. John Railway Company; Stewiacke Valley and Lansdowne Railway Company; Temiscouata Railway Company; Tobique Valley Railway Company. Presented to the House of Commons, 14th May, 1890, by Sir John A. Macdonald..... *Not printed.*
- 43.** Return to an order of the House of Commons, dated 12th February, 1890, for a list of Indian reserves within the Province of Manitoba, giving location and area of each one, number of Indians belonging to it at the time of location of such reserve, and number now actually living on same. Presented to the House of Commons, 26th February, 1890.—*Mr. LaRivière*—
Printed for both Distribution and Sessional Papers.
- 43a.** Return to an order of the House of Commons, dated 20th January, 1890, for a return giving the names of all persons who were tried before a magistrate for selling intoxicating liquors to Indians in the county of Grey or Bruce, in the year 1888-89; together with all papers, documents and letters on the subject; also the name of the party who laid the information, the name of the magistrate before whom it was tried, the name of the constable employed, and the name of the lawyer retained in each case, together with the decisions of the magistrate, stating the fines imposed, if any; also if any appeals were made from the decisions of the magistrate, stating before what judge the appeals were tried and what was the result: giving the cost of each trial before the magistrate, and of each appeal before the judge, together with the name, occupation and post office address of every person who received money for any service whatever, either at the trial at the magistrate's court or at the appeal before the judge; the total cost of all the trials, the total fines imposed and collected. If costs were refused at any trial, giving the reason for such refusal; also showing whether any of the Indians who received whiskey were electors of Bruce under the Electoral Franchise Act of Canada. Presented to the House of Commons, 10th March, 1890.—*Mr. Landerkin*..... *Not printed.*
- 43b.** Return to an order of the House of Commons, dated 10th March, 1890, for a statement showing: 1. All moneys in the hands of the Superintendent General of Indian Affairs, belonging to the Indians of the Caughnawaga Reserve. 2. All the several sources from which the said moneys were derived. Presented to the House of Commons, 26th March, 1890.—*Mr. Doyon*..... *Not printed.*

- 43c.** Return to an order of the House of Commons, dated 10th March, 1890, for copies of all correspondence between the Indian Department and the agent or chiefs of the Caughnawaga Reserve, in relation to any indemnity obtained by the Indians of the reserve, on the ground that the extent of their reserve has been considerably diminished by encroachments. Presented to the House of Commons, 9th May, 1890.—*Mr. Doyon*.....*Not printed.*
- 44.** Statement of the affairs of the British Canadian Loan and Investment Company, on 31st December, 1889. Presented to the House of Commons, 16th May, 1890, by Hon. Mr. Speaker...*Not printed.*
- 45.** Return to an address of the House of Commons to His Excellency the Governor General, dated 1st April, 1889, for a return : 1. Giving the names and places of residence of the commissioners appointed in 1883 for the purpose of examining and reporting upon the fitness and eligibility of persons appearing before them for examination and qualification as inspectors of the hulls of freight and passenger steamers plying in Canadian waters. 2. Copies of the circular sent out inviting competitors to meet at Ottawa, and the date or dates so mentioned from time to time. 3. The names and places of residence of all persons who were so examined at each and every meeting of the said commissioners up to date. 4. Copies of the recommendation or recommendations of any of the said commissioners, or any one of them, respecting the said examination or the qualifications, or otherwise, of any or all who underwent such examination at the first or any subsequent meeting of the said commissioners, or either of them. 5. The name and place of residence of each and every inspector of freight and passenger steamer hulls appointed by the Government from 1882 to date ; indicating who were appointed after undergoing and passing the necessary examination, as well as giving the name and place of residence of each and every inspector of such hulls who was appointed without having successfully passed the said examination, together with the name and place of residence of any inspector so appointed, since 1882 to date, who had been dismissed or had resigned within the time specified, and the cause assigned for such dismissal or resignation. 6. The name and place of residence of any person appointed to fill any vacancy or addition as inspector of said hulls. 7. Copies of all correspondence between the Minister of Marine and any person respecting any of the questions enumerated herein. Presented to the House of Commons, 3rd March, 1890.—*Mr. Wilson (Elgin)*.....*Not printed.*
- 46.** Return to an address of the House of Commons to His Excellency the Governor General dated 20th February, 1890, for a copy of the report of Mr. A. F. Wood upon the investigation which he has made into affairs connected with the Welland Canal. Presented to the House of Commons, 6th March, 1890.—*Mr. Edgar*.....*Not printed.*
- 46a.** Return to an order of the House of Commons, dated 29th January, 1890, for a return showing the date of the creation of the Trent Valley Canal Commission, the time and place of the first sitting, the actual number of days it has actually been occupied in the work appertaining to the said Commission, and the number of days and of sittings held in taking and receiving evidence, and the places whereat thus far sittings of the commission have been held. Presented to the House of Commons, 5th March, 1890.—*Mr. Barron*.....*Not printed.*
- 46b.** Return to an order of the House of Commons, dated 3rd March, 1890, for a statement showing, for each year since 1878 : 1. The number of vessels which have passed through the Chambly Canal, and their tonnage. 2. The amount of, and the description of freight carried by these vessels. 3. The amount of tolls collected in the said several years on the said canal. Presented to the House of Commons, 17th March, 1890.—*Mr. Préfontaine*.....*Not printed.*
- 46c.** Supplementary Report of A. F. Wood, Esq., of the Welland Canal Investigation with suggestions as to changes in the present system of management. Presented to the Senate, 1st May, 1890, by Hon. Mr. Abbott.....*Not printed.*
- 47.** Return to an order of the House of Commons, dated 24th February, 1890, for a return of the number of cases entered in the Vice-Admiralty Court of Quebec, during the years 1885, 1886, 1887, 1888 and 1889 ; the number of cases entered during the same years in the Vice-Admiralty Court of Nova Scotia ; and the number of cases entered during the same year in the Vice-Admiralty Court of New Brunswick. Presented to the House of Commons, 5th March, 1890.—*Mr. Weldon (St. John)*.....*Not printed.*
- 48.** Return to an order of the House of Commons, dated 23rd January, 1890, for a statement in detail showing the expenditure made in connection with the Marine and Emigrant Hospital at Quebec, since the 30th June, 1886, the said statement giving : 1. The sum voted each year by the Dominion Parliament. 2. The amount expended. 3. The number of sailors and emigrants taken in each year, and the total number of days that each one of these passed in the hospital. 4. The number of persons not being sailors or emigrants, taken into the said hospital, and the number of days that each one of this class passed there. 5. The total cost day by day of each patient. 6. The amount received by the Government for the patients who are neither emigrants nor sailors. 7. The amount

received from the Sick Mariners' Fund under the Act 49 Vic., chap. 76, section 16. Presented to the House of Commons, 5th March, 1890.—*Mr. Langelier (Quebec Centre)*—

Printed for both Distribution and Sessional Papers.

- 48a. Return to an address of the House of Commons to His Excellency the Governor General, dated 22nd January, 1890, for copies of all Orders in Council, correspondence and documents respecting the establishment of the Marine Hospital at Quebec and respecting the closing of the same. Presented to the House of Commons, 17th March, 1890.—*Mr. Langelier (Quebec Centre)*. *Not printed.*
49. Return to an order of the House of Commons, dated 29th January, 1890, for a return showing whether or not the island known as Sultana Island, in the Lake of the Woods, has been sold, and if sold, showing by what right or title the Government of Canada claimed to have the power to sell the same; showing, also, all correspondence had between the Government of Canada and the purchaser or purchasers of said island, or the solicitors or other persons acting on behalf of such purchaser or purchasers (if any); showing, also, the area of land contained in said island, and the value and extent of the pine timber thereupon, and the price or amount for which the said island was sold, and the names and addresses of the purchaser or purchasers thereof. Also any map showing locality of island. Presented to the House of Commons, 5th March, 1890.—*Mr. Barron*—*Not printed.*
- 49a. Supplementary return to an order of the House of Commons, dated 29th January, 1890, for a return showing whether or not the island known as Sultana Island, in the Lake of the Woods, has been sold, and if so, showing by what right or title the Government of Canada claimed to have the power to sell the same; showing, also, all correspondence had between the Government of Canada and the purchaser or purchasers of said island, or the solicitors or other persons acting on behalf of such purchaser or purchasers (if any); showing, also, the area of land contained in said island, and the value and extent of the pine timber thereupon, and the price or amount for which the said island was sold, and the names and addresses of the purchaser or purchasers thereof. Also any map showing locality of island. Presented to the House of Commons, 2nd April, 1890.—*Mr. Barron*. *Not printed.*
50. Return to an order of the House of Commons, dated 17th April, 1889, for a return showing the number of permanent clerks employed by the Department of the Interior, including inside and outside service. And also the number of extra clerks at present in the employ of the said department in the same service. Presented to the House of Commons, 5th March, 1890.—*Mr. Weldon (St. John)*—*Not printed.*
51. Official correspondence in the matter of Private C. J. Hurrell, applying for further compensation as a wounded volunteer. Presented to the House of Commons, 7th March, 1890, by Sir Apolphe Caron. *Not printed.*
- 51a. Official correspondence in the matter of Valiquette's pension. Presented to the House of Commons, 7th March, 1890, by Sir Adolphe Caron. *Not printed.*
- 51b. Return to an order of the House of Commons, dated 26th March, 1890, for a statement showing: 1. The date when Private C. T. Hurrell was notified by the Government of the passing of the passing of the Order in Council of the 13th November, 1888, granting him a pension. 2. The amounts paid him by way of gratuity or pension, and the dates of such payments. Presented to the House of Commons, 18th April, 1890.—*Mr. Mulock*. *Not printed.*
- 51c. Copy of a declaration made by Antoine Valiquette, father of the late Primat Valiquette, sergeant in the 65th Battalion. Presented to the House of Commons, 18th April, 1890, by Sir A. P. Caron. *Not printed.*
52. Return to an order of the House of Commons, dated 30th January, 1890, for copies of all letters to the Government asking that engineers be sent to examine Kettle Creek, between St. Thomas and Port Stanley, with a view to ascertaining the feasibility of building a canal; and all reports, maps and other documents sent in by such engineers. Presented to the House of Commons, 10th March, 1890.—*Mr. Wilson (Elgin)*. *Not printed.*
53. Return to an order of the House of Commons, dated 12th February, 1890, for copies of all correspondence between the Government, or any of its departments, and the corporation known as the "Président et syndics de la commune de la seigneurie d'Yamaska," respecting damages occasioned to their lands by the dam erected in the Yamaska River. Presented to the House of Commons, 10th March, 1890.—*Hon. Mr. Laurier*. *Not printed.*
- 53a. Return to an order of the House of Commons, dated 24th February, 1890, for copies of all claims made by Elphège Cardin, Jean Cardin, George Tonnancourt and Bruno St. Germain, to be compensated for damages occasioned to their lands by the dam erected in the Yamaska River; of all correspondence arising out of such claims; together with a statement of all sums allowed to each of them in settlement of their claims. Presented to the House of Commons, 20th March, 1890.—*Hon. Mr. Laurier*. *Not printed.*

- 53b.** Return to an order of the House of Commons, dated 12th February, 1890, for copies of the late reports made by the Engineer of the Public Works Department respecting works to be carried out at Rivière du Sud, in the county of Montmagny. Presented to the House of Commons, 17th March, 1890.—*Mr. Choquette*. *Not printed.*
- 54.** Return to an order of the House of Commons, dated 30th January, 1890, for a return of all correspondence, petitions, reports or other papers respecting the sale, ownership or condition of the Dundas and Waterloo Macadamized Road, since the close of the session of 1889. Presented to the House of Commons, 10th March, 1890.—*Mr. Bain (Wentworth)*. *Not printed.*
- 54a.** Return to an order of the House of Commons, dated 29th January, 1890, for copies of all petitions, reports of engineers, and all correspondence in reference to the dredging of the bar at the mouth of the river Thames, in the county of Kent, Ontario. Presented to the House of Commons, 10th March, 1890.—*Mr. Campbell*. *Not printed.*
- 55.** Return to an order of the House of Commons, dated 22nd January, 1890, for copies of all correspondence and documents respecting the appointment of Mr. Joseph Garneau as Superintendent of Government works at Quebec; and respecting his removal and the substitution of a person named L. P. Lépine. Presented to the House of Commons, 10th March, 1890.—*Mr. Langelier (Quebec Centre)*. *Not printed.*
- 56.** Return to an order of the House of Commons, dated 5th February, 1890, for a return of a copy of the contract and specification for the erection of the Post Office and Custom House building at Annapolis, Nova Scotia; the several tenders and amounts thereof; also any order or orders altering the quality and nature of the stone used in the construction. Presented to the House of Commons, 10th March, 1890.—*Mr. Weldon (St. John)*. *Not printed.*
- 56a.** Return to an order of the House of Commons, dated 4th March, 1889, for copies of all petitions and resolutions forwarded to the Government by the citizens or Corporation of the town of Lévis, in relation to the building of a post office in the said town. Presented to the House of Commons, 10th March, 1890.—*Mr. Guay*. *Not printed.*
- 56b.** Return to an order of the House of Commons, dated 12th February, 1890, for copies of all petitions, letters, etc., to the Department at Ottawa, praying for a post office at Palmer Road, Prince Edward Island; also all correspondence to and from the Post Office Department at Ottawa and the Post Office Inspector at Charlottetown, Prince Edward Island, on the same subject. Presented to the House of Commons, 21st April, 1890.—*Mr. Perry*. *Not printed.*
- 56c.** Return to an order of the House of Commons, dated 12th February, 1890, for copies of two enquiries made by Messrs. Bourgeois, King and Bolduc, respecting the post office at Pierreville, P.Q.—*Mr. Choquette*. *Not printed.*
- 57.** Return to an order of the House of Commons, dated 11th March, 1889, for copies of all correspondence, reports, etc., respecting the wharf at St. Roch des Aulnets, in the county of L'Islet, between the Department of Public Works and the late Charles Frs. Roy, surveyor, and the residents of the said municipality interested therein. Presented to the House of Commons, 10th March, 1890.—*Mr. Casgrain*. *Not printed.*
- 57a.** Return to an order of the House of Commons, dated 27th January, 1890, for copies of the accounts connected with the building of a wharf at Kamouraska, in the province of Quebec, made up in the course of the year 1889. Presented to the House of Commons, 10th March, 1890.—*Mr. Dessaint*. *Not printed.*
- 58.** Return to an order of the House of Commons, dated 27th January, 1890, for a statement, in detail, showing the expenditure made in connection with repairs to Tignish Breakwater, Prince Edward Island, during 1889; the date of commencement of work, and when completed; the name of party in charge of work. Presented to the House of Commons, 10th March, 1890.—*Mr. Perry*. *Not printed.*
- 58a.** Return to an order of the House of Commons, dated 26th February, 1890, for a statement showing the number of Government wharves, piers and breakwaters repaired in Prince Edward Island during the year 1889, the amount expended on each of said wharves, piers and breakwaters. Presented to the House of Commons, 20th March, 1890.—*Mr. Perry*. *Not printed.*
- 59.** Return to an order of the House of Commons, dated 24th February, 1890, for copies of the reports made by the chief engineer relating to the survey of Cove Head Harbor, in Prince Edward Island, four or five years ago. Presented to the House of Commons, 10th March, 1890.—*Mr. Davies*. *Not printed.*
- 59a.** Return to an order of the House of Commons, dated 20th January, 1890, for a copy of Government engineer's report of survey of Harbors of Pinette and Wood's Island, and also copy of report of survey of New London Harbor and Breakwater, in the province of Prince Edward Island. Presented to the House of Commons, 10th March, 1890.—*Mr. Welsh*. *Not printed.*

- 59b.** Return to an order of the House of Commons, dated 24th February, 1890, for copies of any reports made by the chief engineer relating to survey of Tracadie Harbor, Prince Edward Island, some years ago. Presented to the House of Commons, 20th March, 1890.—*Mr. Davies*.... *Not printed.*
- 59c.** Return to an order of the House of Commons, dated 10th March, 1890, for a return showing the date of commencing the work of blasting the rock in Cascumpec Harbor, in Prince Edward Island, in the summer of 1889, the date at which the work stopped, the names of workmen employed, the amount of wages paid to each diver and to each laborer; also the whole amount expended in blasting said rock up to December, 1889. Presented to the House of Commons, 1st April, 1890.—*Mr. Perry*.... *Not printed.*
- 59d.** Return to an order of the House of Commons, dated 10th March, 1890, for a return showing the number of tenders made or put in for the public work at the eastern gap of the Toronto Harbor works; the name or names of each person or company tendering for the work and the amount of each tender and the terms thereof, with a statement of the approximate quantities upon which each tender was calculated; and of all letters and correspondence, statements, documents and papers pertaining to the letting of the contract and to any and all of the tenders. Presented to the House of Commons, 1st April, 1890.—*Mr. Barron*.... *Not printed.*
- 59e.** Return to an order of the House of Commons, dated 19th March, 1890, for a return of all correspondence, petitions, memorials, reports of the chief engineer of the Department relative to the necessity and expediency of dredging and otherwise improving the harbor at Picton, Bay of Quinté, since 1st January, 1883; and also containing all correspondence, petitions, memorials and reports concerning the desirability or expediency of construction of public buildings at the said town of Picton for the accommodation of post office, customs and inland revenue offices in that town, since 1st January, 1886. Presented to the House of Commons, 2nd April, 1890.—*Mr. Platt*—
Not printed.
- 59f.** Return to an order of the House of Commons, dated 17th March, 1890, for copies of all reports of the chief engineer on the pier at Hall's Harbor, Nova Scotia, since the year 1882; and for copies of all correspondence relating to said pier. Presented to the House of Commons, 2nd April, 1890.—*Mr. Borden*.... *Not printed.*
- 59g.** Statements and correspondence in reference to the Harbor Works at Quebec, Graving Dock at Esquimalt, etc. Presented to the House of Commons, 16th May, 1890, by Sir Hector Langevin—
Printed for both Distribution and Sessional Papers.
- 60.** Return to an order of the House of Commons, dated 30th January, 1890, for a statement showing the amount of dredging done during the season of 1889 in Prince Edward Island by the dredge "Prince Edward;" the names of harbors and other places dredged during said season, and the amount of work done in each harbor. Presented to the House of Commons, 10th March, 1890.—*Mr. Perry*.... *Not printed.*
- 61.** Return to an order of the House of Commons, dated 24th February, 1890, for copies of all correspondence which has passed between the Auditor General and the Minister of the Interior, or any other person, in reference to the allowance for travelling expenses of William McGirr, private secretary to the Superintendent General of Indian Affairs. Presented to the House of Commons, 10th March, 1890.—*Mr. Lister*.... *Not printed.*
- 62.** Return to an address of the House of Commons to His Excellency the Governor General, dated 29th January, 1890, for a copy of the quarantine regulations of Grosse Isle, together with all Orders in Council and instructions given to the medical officers at said station. Presented to the House of Commons, 10th March, 1890.—*Mr. Landerkin*.... *Not printed.*
- 63.** Return to an order of the House of Commons, dated 12th February, 1890, for copies of correspondence in connection with a claim, made by the district of St. Peter's, in the county of Richmond, for medical attendance and board of Kenneth Chisholm, a sick mariner, belonging to the schooner "Jeanie." Presented to the House of Commons, 10th March, 1890.—*Mr. Flynn*—
Not printed.
- 64.** Return to an order of the House of Commons, dated 24th January, 1890, for a return showing: 1. The total number of Chinese immigrants who have arrived in the Dominion of Canada from the 31st March, 1887, to the 31st December, 1889, specifying the ports at which such immigrants have arrived. 2. The amount of fees or duties collected from Chinese immigrants during the same period. 3. The number of certificates of residence that have been issued to Chinese as provided for under section 13 of the Act to restrict and regulate Chinese immigration into Canada, since the passage of the Act. 4. The number of Chinese who have been detected in attempting to land in Canada upon fraudulent certificates and who were prevented by the courts from doing so. 5. Copies of all correspondence having reference to the removal from office of Mr. Vroman *alias* Mr. Gardner, and also all correspondence having reference to the appointment of a Chinaman to the

position of interpreter at the port of Vancouver, in the place of the said Mr. Gardner. 6. The number of Chinese who have passed through Canada in bond for passage from Vancouver by steamer to China, and the regulations that have been prescribed for placing them securely on board said steamers to prevent their disembarkation into Canada. 7. The total number of Chinese other than those in bond who have left Canada during the first mentioned period, and the number of return certificates that have been issued. Presented to the House of Commons, 10th March, 1890.

—*Mr. Gordon*.....*Printed for Sessional Papers only.*

65. Return to an address of the Senate to His Excellency the Governor General, dated 21st January, 1890, for copies of all reports and other communications in reference to the deposit of sawdust, slabs, or other offensive material, in the Ottawa and other rivers of the Dominion. Presented to the Senate, 10th March, 1890.—*Hon. Mr. Clemon*—

Presented for both Distribution and Sessional Papers.

- 65a. Return to an order of the House of Commons, dated 24th February, 1890, for a copy of the report of Sandford Fleming, C.E., of the examination made by him as to sawdust, &c., put in the Ottawa by the saw mills at the Chaudière and other mills on the Ottawa River. Presented to the House of Commons, 20th March, 1890.—*Mr. Landerkin*.....*Not printed.*

66. Return to an address of the Senate to His Excellency the Governor General, dated 22nd January, 1890, for a detailed statement showing the settlement effected with the lessees of hydraulic lots at the Chaudière, city of Ottawa; as likewise copies of new leases entered into with the several lessees of the said hydraulic lots. Presented to the Senate, 10th March, 1890.—*Hon. Mr. Clemon*.

Not printed.

- 66a. Return to an order of the House of Commons, dated 24th February, 1890, for return showing the names of all parties in arrears for hydraulic and other rents up to the 1st instant, and the amounts respectively due by such parties. Presented to the House of Commons, 22nd April, 1890.—*Mr. Somerville*.....*Not printed.*

67. Return to an address of the House of Commons to His Excellency the Governor General, dated 29th January, 1890, for copies of all petitions, correspondence and documents of every nature respecting the Great Eastern Railway, or any other line of railway which it is proposed to lay between Lévis and Montreal, following the course of the river St. Lawrence. Presented to the House of Commons, 12th March, 1890.—*Mr. Rinfret*.....*Not printed.*

68. Report in relation to the appointment of non-commissioned officers in the Royal Military College. Presented to the House of Commons, 13th March, 1890, by Sir A. P. Caron.....*Not printed.*

69. Certified copy of a report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council on the 11th January, 1885, in relation to matters between the Government and the city of Ottawa. Presented to the House of Commons, 17th March, 1890, by Sir Hector Langevin.....*Not printed.*

70. Return to an address of the House of Commons to His Excellency the Governor General, dated 27th January, 1890, for copies of the reports or opinions of the Law Officers of the Crown relating to the Act passed by the Legislature of the province of Quebec intituled: "An Act for the settlement of the Jesuits' Estates," and also copies of the case or cases or other documents or reports submitted to the said Law Officers, or to Her Majesty's Secretary of State for the Colonies, in relation to the said Act, and upon which the said opinions were obtained, and also all the despatches and correspondence in reference thereto. Presented to the House of Commons, 17th March, 1890.—*Mr. O'Brien*.....*Printed for both Distribution and Sessional Papers.*

71. Return to an order of the House of Commons, dated 24th February, 1890, for a statement showing, in detail, the population by origin, according to the census of 1885, of that part of the provisional district of Saskatchewan lying to the south of the line between townships 47 and 48, and bounded on the west by the line between ranges 11 and 12, west of the 3rd initial meridian, and on the east by the 3rd initial meridian, in the Dominion Lands system of survey, now the electoral district of Batoche. Also of that part of the same provisional district lying to the east of the 3rd initial meridian in the Dominion Land system of survey, and bounded on the north by the southern boundary of the electoral district of Prince Albert, now the electoral district of Kinistino. Presented to the House of Commons, 17th March, 1890.—*Mr. Laurier*.....*Not printed.*

72. Return to an order of the House of Commons, dated 12th February, 1890, for a return showing the annual losses of ships since 1868 in the Gulf of St. Lawrence and on the Atlantic coast and Bay of Fundy, owing to tides, currents and fogs, with the name and tonnage of each vessel, and such particulars in each case as to the causes and extent of damage, as may be in the possession of the Government. Presented to the House of Commons, 17th March, 1890.—*Mr. Curran*—

Printed for Sessional Papers only.

- 73.** Return to an order of the House of Commons, dated 24th February, 1890, for a return showing the number of Reports of the Geological Survey published respectively for each year of the last ten years, the number sold each year, the number distributed gratuitously, and the number still on hand. Presented to the House of Commons, 17th March, 1890.—*Mr. Ferguson (Welland)*—
Printed for Sessional Papers only.
- 74.** Correspondence of the Governments of Ontario and Quebec in reference to the ownership of the beds of harbors, rivers, etc. Presented to the House of Commons, 19th March, 1890, by Sir John Thompson.....*Printed for both Distribution and Sessional Papers.*
- 75.** Statement, in detail, of Receipts and Payments of Canada, for the eight months ending 28th February, for the years 1889 and 1890 respectively. Presented to the House of Commons, 20th March, 1890, by Hon. G. E. Foster.....*Not printed.*
- 76.** Return to an address of the House of Commons, to His Excellency the Governor General, dated 29th January, 1890, for : 1. Copies of all petitions addressed to his Excellency the Governor General by settlers in the districts of Cranberry, Cedar, Wellington, Nanoose and Nanaimo, British Columbia, asking the privilege of obtaining the lands on which they had squatted on the Island Railway reserve on ordinary terms allowed to settlers, viz., that their grant should include surface and minerals. 2. For copies of all Orders in Council passed to authorise a commission to enquire into the claims of said settlers. Presented to the House of Commons, 26th March, 1890.—*Hon. Mr. Laurier*.....*Not printed.*
- 77.** Return to an order of the House of Commons, dated 19th March, 1890, showing salary and remuneration paid to Mr. Arthur Prieur, employee of the House, as translator or otherwise, and the total amount received by him since his employment in any capacity. Presented to the House of Commons, 31st March, 1890, by Hon. Mr. Speaker.....*Not printed.*
- 78.** Return to an order of the House of Commons, dated 19th March, 1890, for a return showing : 1. The actual cost of first construction of the Montreal Court House, 1851-57. 2. The amount spent for repairs since each year down to Confederation. Presented to the House of Commons, 1st April, 1890.—*Mr. Curran*.....*Not printed.*
- 79.** Return to an order of the House of Commons, dated 12th February, 1890, for a return showing : 1. The total amount of money expended in dredging McGregor's Creek, in the town of Chatham, Ontario. 2. The amount expended for piling and planking the same. The name of each contractor, and amount of their several contracts. 3. The amount of money paid property owners for damage done to their property in consequence of such dredging, with the name and amount paid each property owner. 4. The name and amount of all claimants whose claims have been rejected, or which are still under the consideration of the Government. Presented to the House of Commons, 1st April, 1890.—*Mr. Campbell*.....*Not printed.*
- 80.** Return to an order of the House of Commons, dated 24th February, 1890, for the report and plans of the Chief Engineer of the Department of Public Works employed to make a survey and examination, with a view to the construction of an inter-provincial bridge across the Ottawa River, between the village of La Passe, in the province of Ontario, and the village of Fort Coulonge, in the province of Quebec. Presented to the House of Commons, 1st April, 1890.—*Mr. Bryson*—
Not printed.
- 81.** Return to an order of the House of Commons, dated 24th February, 1890, for a return showing the number of self-binders, reapers and mowers exported from the Dominion during the past three years; giving the names of the exporters, the countries to which exported, and the amount of drawback allowed on each of the articles so exported. Presented to the House of Commons, 3rd April, 1890.—*Mr. Paterson (Brant)*.....*Not printed.*
- 82.** Return to an address of the House of Commons to His Excellency the Governor General, dated 22nd January, 1890, for copies of all correspondence between the officers of the Temperance Colonization Company, and the officers of the Saskatchewan Land and Homestead Company, and the Department of the Interior, or any member of the Government; and all correspondence between Rev. Alexander Sutherland and John T. Moore and the Department of the Interior, or any member of the Government, in relation to the location of lands and claims for placing immigrants on lands, and compensation for assisting immigration to the said lands, together with all Orders in Council relating to such claims. Presented to the House of Commons, 14th April, 1890.—*Mr. Somerville*—
Not printed.
- 82a.** Supplementary return to an address of the House of Commons, to His Excellency the Governor General, dated 22nd January, 1890, for copies of all correspondence between the officers of the Temperance Colonization Company and the officers of the Saskatchewan Land and Homestead Company and the Department of the Interior, or any member of the Government; and all correspondence between the Rev. Alexander Sutherland and John T. Moore and the Department of the

Interior, or any member of the Government, in relation to the location of lands and claims for placing immigrants on lands, and compensation for assisting immigration to the said lands, together with all Orders in Council relating to such claims. Presented to the House of Commons, 18th April, 1890.—*Mr. Somerville* *Not printed.*

- 82b.** Return to an order of the House of Commons, dated 17th March, 1890, for a return of all correspondence, memorials and agreements between the Government and the Temperance Colonization Company, together with correspondence of settlers, employees and members of the Company, relative to the operations of the said company. Presented to the House of Commons, 16th May, 1890.—*Mr. Wallace*..... *Not printed.*
- 83.** Return to an order of the House of Commons, dated 10th March, 1890, for copies of all petitions and correspondence respecting the placing of a floating light opposite Yamachiche, in Lake St. Peter, River St. Lawrence. Presented to the House of Commons, 16th April, 1890.—*Mr. Rinfret*.
Not printed.
- 83a.** Return to an order of the House of Commons, dated 19th March, 1890, for copies of all petitions, correspondence and documents whatsoever respecting the placing of a floating light on the St. Lawrence opposite the church of Ste. Croix, in the county of Lotbinière, in place of the buoy now located there. Presented to the House of Commons, 25th April, 1890.—*Mr. Rinfret* *Not printed.*
- 84.** Report of Collingwood Schreiber, Esq., Chief Engineer and General Manager of Government Railways, on the completion of the location survey of the proposed line of railway between Harvey Station on the New Brunswick Railway, and a point on the Intercolonial Railway near Moncton *via* Fredericton, known as the "Harvey-Moncton Section of the Short Line Railway." Presented to the House of Commons, 24th April, 1890, by Sir John Macdonald *Not printed.*
- 85.** Return to an order of the House of Commons, dated 10th March, 1890, for copies of forms of advertisement and of tender, of tenders received of the contract entered into in connection with a steam service between any ports in the Maritime Provinces and any West India ports ; also all correspondence connected therewith between any of the public departments and any persons interested in the establishment of the said service. Presented to the House of Commons, 29th April, 1890—*Mr. Trow*..... *Not printed.*
- 86.** Return to an order of the House of Commons, dated 24th January, 1890, for a return of all papers and correspondence between the Ontario Manufacturers' Association and the Dominion Government, during the years 1883, 1884 and 1885, on the subject of proposed legislation relating to factories. Presented to the House of Commons, 1st May, 1890.—*Mr. Edgar*..... *Not printed.*
- 87.** Return to an order of the House of Commons, dated 30th January, 1890, for copy of report made and evidence taken by the court of enquiry ordered by the Department of Marine to investigate the loss of the steamer "Quinté," which was burned on Bay of Quinté in the autumn of 1889. Presented to the House of Commons, 2nd May, 1890.—*Mr. Platt*.... *Printed for Sessional Papers only.*
- 87a.** Return to an order of the House of Commons, dated 5th March, 1890, for a return of all claims made by the Government since Confederation against individuals, companies or corporations for damages done to Government property by steamers, vessels or other craft ; giving the names of vessels, etc., their owners, dates and items of each claim, distinguishing those paid and unpaid. Presented to the House of Commons, 2nd May, 1890.—*Mr. Cook*..... *Not printed.*
- 87b.** Report of Lieut. Gordon, R.N., into the conduct of the master and mate of the steamship "Baltic," in connection with the outrage perpetrated on one Charles Hambly, a deck-hand of the said vessel, on the 26th August, 1889. Presented to the House of Commons, 14th May, 1890, by Hon. Mr. Colby..... *Printed for Sessional Papers only.*
- 87c.** Return (*in part*) to an order of the House of Commons, dated 5th March, 1890, for a return of all claims made by the Government since Confederation against individuals, companies or corporations for damages done to Government property by steamers, vessels or other craft ; giving the names of vessels, etc., their owners, dates and items of each claim, distinguishing those paid and unpaid. Presented to the House of Commons, 16th May, 1890.—*Mr. Cook*..... *Not printed.*
- 88.** Return to an order of the House of Commons, dated 14th April, 1890, for copies of all agreements made between the Government, or the Minister of Railways, and the Western Union Telegraph Company, respecting the construction and operation of a telegraph line along the Cape Breton Railway. Presented to the House of Commons, 2nd May, 1890.—*Mr. Macdonald (Victoria)*—
Not printed.
- 89.** Return to an order of the House of Commons, dated 14th April, 1890, for copies of the petitions, letters, and the plans and engineers' reports respecting the projected dam at Hungry Bay, in the county of Beauharnois. Presented to the House of Commons, 2nd May, 1890.—*Mr. Bergeron*—
Not printed.
- 90.** Return to an order of the House of Commons, dated 21st April, 1890, for copies of all petitions and other documents relating to the building of the proposed branch railway to Matane. Presented to the House of Commons, 2nd May, 1890.—*Mr. Fiset*..... *Not printed.*

91. Liquor License Act, 1883, memorandum of claims for fines, costs, &c., imposed on holders of Dominion Licenses for violations of the Provincial License Act. Presented to the House of Commons, 5th May, 1890, by Hon. J. Costigan. *Printed for Sessional Papers only.*
- 91a. Return to an order of the House of Commons, dated 10th March, 1890: 1. For a return, in detail, of all expenses attending the passage and enforcement of the Liquor License Act of 1883 up to date. 2. The amount of all law costs *re* its constitutionality. 3. The names of all the legal firm or firms employed by the Government, and the amount paid said firm or firms. Presented to the House of Commons, 16th May, 1890.—*Mr. Trow*. *Not printed.*
92. Return to an order of the House of Commons, dated 14th April, 1890, for copies of all correspondence between the Department of Militia and Defence and the officers of the staff of Military District No. 1 regarding the pay and allowances of said officers. Presented to the House of Commons, 6th May, 1890.—*Mr. Scriver*. *Not printed.*
- 92a. Return to an address of the House of Commons to His Excellency the Governor General, dated 21st April, 1890, for copies of all Orders in Council making appointments, promotions and changes in the Department of Militia and Defence, for the year ending 31st December, 1889. Presented to the House of Commons, 6th May, 1890.—*Mr. Lister*. *Not printed.*
93. Return to an order of the House of Commons, dated 21st April, 1890, for a return of the quantity and value of eggs imported into and exported from the provinces of Ontario and Quebec since 1st January last; also the countries they have been imported from and exported to. Presented to the House of Commons, 6th May, 1890.—*Mr. Guillet*. *Printed for Sessional Papers only.*
94. Correspondence respecting the surrender of the Anderson contract for the Atlantic Steamship Service. Presented to the House of Commons, 13th May, 1890, by Hon. G. E. Foster—
Printed for Sessional Papers only.
95. Return to an order of the House of Commons, dated 24th January, 1890, for a return showing the total amount of expenditure to date on the Government Printing Bureau building, the total expenditure to date on type, presses and all other printing and binding machinery and material placed in the bureau; also the total amount paid in salaries and wages to officers and employees in the bureau from the 1st July, 1889, to 1st January, 1890. Presented to the House of Commons, 14th May, 1890.—*Mr. Innes*. *Printed for Sessional Papers only.*
96. Return (in part) to an order of the House of Commons, dated 23rd January, 1890, for a return showing the amount of money expended by the Dominion in each province since Confederation to the 30th of June, 1889, under the following heads: 1. Subsidies to railways in each province, excepting the Canada Pacific main line and Sault branch; 2. The several railways built by the Dominion in each Province, including the Intercolonial branches and extensions, but not the main line as originally constructed; 3. The buildings erected or purchased in each province, their location and cost. Presented to the House of Commons, 7th May, 1890.—*Mr. McMullen*—
Printed for both Distribution and Sessional Papers.
97. Return to an order of the House of Commons, dated 31st March, 1890, for a statement showing the number of barrels of Canadian flour brought by sea or directly, or through the United States of America, into the several provinces of Nova Scotia, New Brunswick and Prince Edward Island, during the year 1889. Presented to the House of Commons, 16th May, 1890.—*Mr. Weldon (St. John)*. *Not printed.*
98. Return to an order of the House of Commons, dated 12th February, 1890, for a return showing the names of the six Pagans returned for the parish of Ste. Elizabeth, in the county of Joliette and province of Quebec, in the census returns of 1881, as appears from the original schedule of the enumerator for that parish. Presented to the House of Commons, 16th May, 1890.—*Mr. Charlton*.
Not printed.
99. Return to an order of the House of Commons, dated 10th March, 1890, for copies of all papers connected with the seizure of the tug "Rooth" at Amherstburg, in July or August last, having a raft in tow, and bound from French River to Fort Erie. • Presented to the House of Commons, 16th May, 1890.—*Mr. Charlton*. *Not printed.*
100. General statements and returns of baptisms, marriages and burials in the districts of Chicoutimi, Gaspé, Joliette and Montmagny, for the year 1889. Presented to the House of Commons, 16th May, 1890, by Hon. Mr. Speaker. *Not printed.*
101. Return to an address of the Senate to His Excellency the Governor General, dated 22nd April, 1890, for copies of all correspondence between the Minister or Deputy Minister of Justice, Inspector Moylan, or any official in connection with the Department of Justice, and the Warden, Deputy Warden, or any other official of the British Columbia Penitentiary, relating to the dismissal of John Wiggins, lately a guard in the aforesaid penitentiary. Presented to the Senate, 16th May, 1890.—*Hon. Mr. McInnes (New Westminster)*. *Not printed.*

CANADA.

ANNUAL REPORT

OF THE

MINISTER OF PUBLIC WORKS

FOR THE FISCAL YEAR 1888-89,

ON THE WORKS UNDER HIS CONTROL.

SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER THIRTY-SIX
SECTION 37, OF THE REVISED STATUTES OF CANADA.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA :
PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1890.

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CANADA.

REPORT

OF THE

MINISTER OF PUBLIC WORKS

FOR THE

FISCAL YEAR ENDED 30TH JUNE 1889.

To His Excellency the Right Honourable Sir Frederick Arthur Stanley, Baron Stanley of Preston, in the County of Lancaster, in the Peerage of Great Britain ; Knight Grand Cross of the Most Honourable Order of the Bath ; Governor General of Canada, and Vice Admiral of the same, &c.

MAY IT PLEASE YOUR EXCELLENCY :

In compliance with the requirements of Chapter 36, Section 37, of the Revised Statutes of Canada, I have the honour to submit the Annual Report of the Department of Public Works for the fiscal year ended 30th June, 1889.

The Report contains a statement of the general expenditure of the Department, amounting to \$3,517,297.66, the details of which will be found in Appendix 1, pages 5 to 21, followed by Appendices giving the Annual Reports of the Chief Architect, Chief Engineer, Chief Mechanical Engineer, and other officers of the Department, as well as statements containing information pertaining to the Department.

The works under the control of this Department are :—

PUBLIC BUILDINGS, their construction and maintenance.

HARBOURS AND PIERS, their improvement and construction.

WORKS ON NAVIGABLE RIVERS.

DREDGING AND DREDGE VESSELS.

ROADS AND BRIDGES.

SLIDES AND BOOMS.

TELEGRAPHS.

DESCRIPTION OF WORK DONE.

The following is a description of the work done during the fiscal year on Public Buildings, Harbours, Rivers and Dredging, arranged by Provinces.

PROVINCE OF NOVA SCOTIA.

PUBLIC BUILDINGS.

In this Province the sum of \$25,435.07 was expended on construction, and repairs, of Public Buildings.

At AMHERST, an asphalt sidewalk, with stone curb was laid in front of the public building, and alterations and repairs were made, and the building fitted with incandescent electric lamps.

At ANNAPOLIS, a site for Post Office, &c., was obtained on the corner of St. George and Railway streets, and on 7th June, 1889, a contract for the construction of the building was entered into. The building will be two and a-half stories, of brick, on a stone foundation, 58 feet by 35 feet, with a one-story brick annex for an examining warehouse, 13 feet by 31 feet. The ground floor is to be for the post office and the first floor for the Customs and Inland Revenue Departments, each

department being furnished with a brick vault; and the attic is to be occupied by the caretaker.

At ANTIGONISH, hot water heating apparatus was supplied to the public building, a portion of the basement fitted up for a bonded warehouse and other work executed.

At NAPPAN, a contract has been entered into for the construction of the following buildings in connection with the experimental farm, and the work is in progress.

Superintendent's Residence.—A wooden two-story building, with a stone basement; the main building 42 feet by 34 feet, and a kitchen wing 24 feet by 24 feet.

Workmen's Cottage.—A one and one-half story wooden cottage, 27 feet by 21 feet, on a stone basement, with a summer kitchen in the rear, 10 feet by 14 feet.

Barn and Stabling.—These are to be of wood, and to consist of a main building 111 feet by 50 feet, 40 feet in height, on a stone basement 12 feet in height, and a wing 65 feet, by 32 feet, and 32 feet in height.

At SYDNEY, a contract for the construction of a Post Office, &c., building, on the corner of Charlotte and Dorchester streets, was entered into 12th December, 1888, and construction is now in progress. It consists of a main three-story brick building, on a stone foundation, 57 feet by 44 feet, with a clock tower on the street corner, and a one-story annex, 45 feet by 23 feet, in the rear. The ground floor of main building is to be occupied by the Post Office, the first floor by the Customs, Inland Revenue and Marine offices, and the attic is for the apartments of the caretaker. The Examining Warehouse and the Weights and Measures offices will be in the annex.

General repairs, alterations and improvements have been made to the Public Building and Examining Warehouse, HALIFAX; the Public Building, NEW-GLASGOW; Post Office, WINDSOR, and Public Building, YARMOUTH. (Appendix No. 2, pages 24-26.)

HARBOURS AND RIVERS.

The sum of \$95,793.81 has been expended on construction, and repairs in this Province, during the fiscal year, as under.

At ARISAIG, a contract was entered into for extending the pier 100 feet, and for protecting its seaward face by a deposit of heavy stone; but up to its close no work, except in the way of procuring material, had been done.

BARRINGTON.—A wharf—carried across the flats—to reach fairly deep water, has been commenced, and materials procured to construct about 600 feet of the proposed work.

At BATTY ISLAND, a small wharf, 60 feet in length and 12 feet in width, was built.

At BAYFIELD.—In november, 1887, a contract was entered into for repairing, raising and close-piling the two outer blocks of the wharf, cutting down the central and shore blocks, and for the construction of a new work between the outer blocks and the shore. The whole was completed in November, 1888.

The work of extending the breakwater at Pomquet Point 300 feet was completed in October, 1888.

At BAY ST. LAWRENCE.—Near the head of the bay there is a small lake enclosed by a beach of sand and gravel.

In 1887 a channel was opened through the beach to admit of the passage of boats at high water. Shortly after its completion it was filled in from the outside, over a distance of about 100 feet, and during 1888–89 the channel, which had been alternately opened during freshets and closed during northerly gales, was re-opened and protected by a pier extending 53 feet beyond high water, and by a work of brush and stone, 30 feet in length, inside of it.

The channel remained opened for a while after the completion of the protection work, but is now closed by a short bar opposite the inner end of the pier.

BEAVER RIVER.—The breakwater has been extended 100 feet and other improvements made.

BIG BRAS D'OR.—The wharf, mentioned in my report of last year as being under construction, was completed with the unexpended balance of the appropriation for 1887–88.

BIG POND.—During the year the unexpended balance of the amount appropriated for the previous year was expended in completing a wharf 200 feet in length and 20 feet wide, with a depth at the outer end of 8 feet at lowest water level.

BLUE ROCK.—The contract entered into in November, 1886, for the construction of a breakwater 326½ feet in length, to extend in a south-westerly direction from Blue Cape, was completed in October, 1888.

BROAD COVE.—This work, 400 feet in length, was completed in December, 1888.

At CHETICAMP, a contract was entered into 10th June, 1889, for the construction of a wharf on the eastern side of the harbour, to consist of an approach 125 feet in length and 30 feet wide over a distance of 60 feet from its outer end, with end and side walls of stone and centre filling of earth or stone; and an extension, 80 feet in length, in two blocks, with openings of 17 feet 6 inches. The outer block is to be 60 feet in length along the channel face, and is to have a depth of 4 feet at extreme low water.

DELAP'S COVE.—The western face of the pier protecting the opening into the harbour was extended inwardly 100 feet. A large warping anchor to assist vessels in getting out to sea was placed off the end of the pier, and a portion of the beach was raised.

At DIGBY, a contract was entered into for the removal of the outer block which had been carried, bodily, into the dredged channel by the storm of December 1885, and, after much difficulty, the contractor tore the block to pieces and removed it down to the surface of the mud. During the year the construction of a new block, 45 feet by 45 feet, to replace that carried away, was completed by the Department, and other improvements were effected.

EATONVILLE.—In August, 1888, instructions were given to extend the breakwater 80 feet, but after the work had been commenced a severe storm threatened the total destruction of the inner end of the structure, and work on the extension was therefore suspended, and every exertion made to save the damaged inner end, which passed through several severe storms of last winter without further damage.

At LOWER HORTON, a new wharf, 172 feet in length, has been built on the site of the old.

McNAIR'S COVE.—The re-construction of 160 feet of the breakwater was completed by the contractor in December, 1888.

NOEL.—During the last fiscal year the Department constructed a landing wharf on the west side of the bay. The wharf, including the approach, is 275 feet in length and 25 feet wide with an "L" at the outer end 35 feet long.

At PICTOU ISLAND.—The balance of the amount appropriated for 1887-88 was expended in completing the extension of the east and west wharves. The east wharf has been extended 100 feet and the west wharf 92 feet 6 inches.

PORT HOOD.—During the year a new block 48 feet by 22 feet, was constructed at the south end of the "L" of the pier.

SHEET HARBOUR.—In January last a contract was entered into for the construction of a ballast wharf on the north side of the East River, from the end of the remains of Ball's Wharf, running westerly a distance of 180 feet, and 20 feet wide, with an "L" 20 feet long and 20 feet wide at the western end, and at the close of the fiscal year the work was nearly completed.

At TATAMAGOUCHE, a wharf 96 feet in length was built on the east side of the river, nearly opposite the mouth of the French River, to accommodate the inhabitants living on the eastern side of the river, who were obliged to haul their produce for shipment to the wharves at Tatamagouche, a distance of 3 miles, and the coal which they use from the wharves to their homes.

WALLACE.—The wharf at this place was extended during the past fiscal year to prevent the inner end of the dredged channel from silting up, and at the same time to afford additional shipping facilities.

WESTERN HEAD.—Shortly after the completion of this breakwater, in 1888, this coast was visited by an unusually heavy gale, which destroyed the outer end of the structure, and an appropriation having been made at the session of 1889, the damage done will be made good.

REPAIRS AND IMPROVEMENTS were made to the structures at the following places, viz.:— BRULÉ, CRANBERRY HEAD, COW BAY, at which place extensive repairs were made to the breakwater; EAST BAY, GREEN COVE (or PORT MAITLAND), HAMPTON, JONES HARBOUR, KINGSPORT, LITTLE NARROWS, LISMORE, MABOU, MAIN A DIEU, MARGARETVILLE, PARKER'S COVE, PARRSBORO', PARTRIDGE ISLAND PIER, PORT GREVILLE, PORT HOOD, PORT LORNE, ROSEWAY BEACH, ROUND BAY, SPENCER'S ISLAND, TROUT COVE.

DREDGING, either by one of the Department's dredges, or by hand, was also done for the improvement of navigation, or to enable fishing boats to make a shelter, at the undermentioned localities:—

ARISAIG, BARRINGTON, BAYFIELD, GABAROUS and BELFRY LAKES, GRANTON, GREEN HARBOUR, LITTLE GLACE BAY, McNAIR'S COVE, PARTRIDGE ISLAND RIVER, PICTOU, YARMOUTH.

(For details, see Appendix No. 5, pages 55-119.)

PRINCE EDWARD ISLAND.

PUBLIC BUILDINGS.

During the past year the sum of \$1,812.17 was expended on construction and repairs public buildings.

CHARLOTTETOWN.—Sundry repairs were executed and a new time lock placed in the door of the safe in the Receiver General's Department.

At MONTAGUE.—Additional grading was done around the post office, and the building occupied. (Appendix No. 2, page 24.)

HARBOURS AND RIVERS.

There has been expended on harbours during the past year, the sum of \$15,172.76.

At CASCUMPEC, the work of excavating a channel through the inner bar, which was commenced in 1885, was continued, and with the amount voted for expenditure during the last fiscal year a cut 150 feet in length, 25 feet wide, and to a depth of 15 feet at low water, has been made, the material blasted and removed amounting to 450 cubic yards.

HICKEY'S PIER.—The narrow block built along the eastern face of the outer end, which was in danger of tumbling into the dredged channel, was renewed and replaced by a new block, its top extending over the old main blocks, and new floor-stringers and planking were placed upon the spans and outer block.

At SOURIS, or COLVILLE BAY, a strongly constructed timber block, 30 feet square, was placed at the outer end of the seaward face of the breakwater, to prevent the stone from moving around the end, and the base of the block was close piled.

GENERAL REPAIRS and IMPROVEMENTS were made on the following piers, viz.:—ANNANDALE, BELFAST, CAMPBELL'S COVE, GEORGETOWN, LEWIS POINT, MALPEQUE, NORTH CARDIGAN, NORTH RUSTICO, PINETTE, POWNAL SOUTH RUSTICO, STURGEON, TIGNISH.

Dredging was performed in the undermentioned harbours.

CHARLOTTETOWN—at various wharves—and at RED POINT, where 12 feet depth of water was obtained. (Appendix 5, pages 55 to 62, and page 114.)

NEW BRUNSWICK.

PUBLIC BUILDINGS.

The sum of \$19,679.30 was expended on construction and repairs of Public Buildings.

At DALHOUSIE, the Post Office, etc., building, which was described in my report of last year, is still in progress.

At FREDERICTON, the attic rooms of the post office were partitioned to provide a residence for the caretaker.

At ST. JOHN, the roof covering of the Custom House was replaced with asphalt, the zinc faces of the ereasting were removed and galvanized iron substituted, and the hydraulic hoist provided with heavier shafting, valves, &c.

WOODSTOCK. Arrangements are being made to place a clock in the turret of the post office, etc., building.

Repairs and improvements were made to the Public Building, BATHURST, Post Offices, CARLETON, CHATHAM, FREDERICTON, and MONCTON, Public Building, NEWCASTLE, Custom House, Marine Hospital, Post Office and Savings Bank, ST. JOHN, Public Building St. Stephen, and some furniture was supplied to the residence of the Deputy Warden of the Penitentiary, DORCHESTER. (Appendix No. 2, pages 26, 27 and 28.)

HARBOURS AND RIVERS.

Expenditure on construction and repairs \$54,178.77.

BELLIVEAU.—In March, 1888, a contract was entered into for the construction of a wharf 200 feet long and 24 feet in width (measured on top), after which it was arranged with the contractor to extend the work 33 feet, all of which was satisfactorily completed on the 9th November, 1888.

At CAMPBELLTON, in order to provide a place of deposit for ballast, a contract was entered into 23rd April, 1889, for the construction of a "ballast wharf," the proposed structure being an isolated block 140 feet in length by 35 feet in width, and having at it a depth of 18 feet at extreme low water, spring tides. At the close of the fiscal year this work was fairly in progress.

CAPE TORMENTINE.—Active operations on the wharf were not commenced by the contractor until August, 1888, between which time and the close of the last fiscal year 729 feet of the stone approach have been built.

The work will be 2,500 feet in length, with an L at the outer end, consisting of two branches, each 400 feet in length. Of this length of 2,500 feet, the inner or shore end, for a distance of 1,300 feet, will be built wholly of stone, the remainder and the L of close-faced crib work, completely filled with rock ballast.

At EDGETT'S LANDING, the construction of a ballast wharf having become a necessity, a contract was entered into for the same in January, 1889.

Work was commenced by the contractors in the beginning of June, 1889, and abandoned by them at the end of the month, when, having provided the greater portion of the materials required, they found themselves unable to proceed further.

At FORT DUFFERIN, the timber "break" was completed in August, 1888.

GRAND ANSE.—The reconstruction of the breakwater, which had been in progress during the previous two years was completed.

MIZZONETTE.—To accommodate the residents of the locality, a contract was entered into on the 19th February, 1889, for the construction of a wharf, and the materials required having been got out during the winter, the work was commenced early in June, and had by the 30th or end of the fiscal year been so carried on that it was about a quarter done, the foundation of nine blocks being placed.

The work under construction consists in all of a length of 500 feet, 480 feet of which will be 12 feet wide on top, the remaining 20 feet or outer block 20 feet wide, the whole composed of "blocks" and "spans," and giving at the outer end a depth of 2 feet at low water.

At PARTRIDGE ISLAND, the reconstruction of the eastern pier referred to in my report of last year, has been completed.

At RICHIBUCTO with the amount appropriated 225 feet of the breakwater was re-filled with brush and stone, and extra walings were put on, 300 feet of new work was built and fender piles replaced.

At SHIPPEGAN during the past season a breach made in the winter of 1887-88 has been secured by the reconstruction of the length carried away (60 feet), general repairs also being effected.

To provide wharfage accommodation at ST. LOUIS, a contract was entered into on 6th November, 1888, for the construction of a wharf 200 feet in length and 30 feet wide on top, to extend in a north-easterly direction from the outer end of the south abutment of the bridge. This wharf will have at it a depth of 7 feet at low water spring tides, which rise here $3\frac{1}{2}$ feet, neaps 2 feet. Materials were got out during the winter, and the work commenced during the last week of the fiscal year.

REPAIRS AND IMPROVEMENTS, where required, were made to the breakwaters at ANDERSON'S HOLLOW, HOPEWELL CAPE, POINT DU CHÊNE and UPPER SALMON RIVER.

DREDGING was done on the "Traverse" near CAMPBELLTON, on the KENNEBECASIS, from below Hampton to the bridge at PERRY'S POINT, on the OROMOTO SHOALS, in the St. John River, at the Anchor Line wharf, ST. JOHN HARBOUR, while improvements were made on the RIVER MADAWASKA and at various points on the ST. JOHN. (Appendix No. 5, pages 81 to 87, and 112 and 113.)

PROVINCE OF QUEBEC.

PUBLIC BUILDINGS.

During the year the sum of \$290,133.91 was expended on construction and repairs, of the undermentioned public buildings:—

AYLMER, Post Office.—This building, which was described in my report of last year, was completed, and furnished with a hot water heating apparatus, and is now being fitted up for occupation.

COATICOOK, Public Building, which was described in my report of last year, is being carried on so as to warrant its execution and completion during the autumn of 1889; a heating apparatus has been put in, and fittings for Post Office.

FRASERVILLE (Rivière du Loup).—On 26th March, 1889, Cadastral Lot 266, having a frontage of 100 feet on Iberville street and 75 feet on Champlain street, was purchased for a Post Office etc., Building.

JOLIETTE.—The Post Office, etc., building will, it is expected, be completed in the autumn.

LACHINE.—Cadastral lot No. 253, on St. Joseph street, the main street of the town, was acquired for a site, and plans, &c., for a Post Office building thereon, are being prepared by this Department.

MONTREAL.—The fittings for the various armouries and furnishings for offices were supplied, and the places are now occupied.

Extensive alterations were made to boilers and heating apparatus in the Custom House. The Record Office was enlarged and other work done.

Various alterations and improvements were made in the Examining Warehouse and Post Office.

ST. HYACINTHE.—On 19th March, 1889, a site, consisting of Lot 525, and a portion of 524, on the corner of Girouard and St. Joseph streets, with frontages of 81 feet 6 inches, and 133 feet 3 inches, respectively, was acquired, and plans, &c., for the construction of a public building are in course of preparation.

ST. JEROME.—Public Building. This building, which was described in my report of last year, has since been in constant progress; plans for the hot water apparatus are prepared, and the building is expected to be complete for occupation during December, 1889.

ST. VINCENT DE PAUL PENITENTIARY.—The walls of the western Dormitory wing, which is 116 feet by 42 feet on plan, and is to contain 120 cells, were carried up continuously, and are expected to be roofed in and enclosed by October, 1889.

Additions, alterations and repairs were made to the various buildings and the water works.

REPAIRS, ALTERATIONS and IMPROVEMENTS were effected on the Marine Hospital, CHICOUTIMI; Post Office, HULL. The Citadel, Custom House, Immigration Building, Marine Hospital, Observatory, Post Office and Queen's Wharf Building, QUEBEC; Public Buildings, SHERBROOKE and SOREL, and to the Custom House and Post Office, THREE RIVERS. (Appendix No. 2, pages 28-30).

HARBOURS AND RIVERS.

The expenditure during the year for construction and repairs amounted to \$188,088.00.

Works of construction were carried on at

BAIE ST. PAUL where the wharf at Cap aux Corbeaux was extended 60 feet on a width of 50 feet, the work being done by contract.

At CAP DE CHATTE, the channel was widened and deepened, and otherwise improved.

At CAP SANTÉ, a number of the most dangerous boulders were blasted and removed.

At COTEAU DU LAC, a wharf has been built, consisting of a block 100 feet long by 20 feet wide, with an approach of 110 feet, which has a width of 20 feet. There is 6 feet of water at the outer side of the block, the top of which is 5 feet above water line. A passenger and freight shed, 20 feet by 24 feet, was built on the lower side of the approach.

At the close of the fiscal year the Department was engaged in re-building—over a length of 800 feet—the wharf at COTEAU LANDING, at which steamers make regular calls.

At ETANG DU NORD, that part of the breakwater which was sunk in 1887-88 was filled with stone.

ILE PERROT.—During the last fiscal year a length of 325 feet of pier work, 18 feet in width, was built from the shore outwards, leaving a length of 275 feet yet to be built.

At ILE VERTE, an isolated block, 50 by 40 feet, was built, in 1887, and during the last fiscal year an approach from the block to the shore has been commenced, but there remains 800 feet to be constructed to complete the work.

At LA GRANDE DÉCHARGE of Lake St. John a pier and an ice-breaker have been built.

At LAPRAIRIE, 335 feet in length of crib work wall was built to a height of 11 feet below low water, from the steamboat wharf westward. It is built of open work, 20 feet in width, with a batter of 1 in 12 on the face.

LES EBOULEMENTS.—A room for the accommodation of passengers waiting for the boats was built on the outer end of present pier. It is constructed on posts. Its dimensions are 45 by 25 feet; the roof is covered with metal and the whole building painted with waterproof paint.

LONGUEUIL.—A contract has been entered into for the completion of this wharf, but little work had been done at the close of the year.

At MURRAY BAY a new waiting room 30 by 24 feet was built.

NEWPORT RIVER.—Further pile-protection work was constructed.

At NICOLET a further length of 553 feet of pile-protection work has been built.

PERCÉ.—The landing pier commenced in the winter of 1888 was completed in May last. It was built by contract, and its dimensions are: length over all on top, 320 feet; width on top, 20 feet; height at outer end, $36\frac{1}{2}$ feet—of which $26\frac{1}{2}$ feet only are above the bed of the river, it having settled down some 10 feet during construction; depth of water at outer end, 16 feet at low spring tides, with a rise and fall of from 5 feet to 5 feet 6 inches in full spring tides, and 3 feet ordinary neap tides.

RIVER DU LIÈVRE.—With the intention of fostering especially the phosphate industry and facilitating its transport from the mines to the nearest railway, which is at Buckingham, a contract for the construction of a lock and dam at the Little Rapids was entered into in December, 1886. The lock and dam will be of sufficient height to flood the Long Rapids about $7\frac{1}{2}$ miles above the site of the lock, and therefore will give an uninterrupted navigation of 22 miles—that is, from the village of Buckingham to the foot of High Falls. The lock has a length of 160 feet between the gates and is 32 feet 7 inches in breadth, with 8 feet of water on the mitre sills. Entrance piers are also under construction. Proper provision will be made for the passage of timber over the dam, which is being constructed 11 feet above low water at the head of the Little Rapids. The work is well under way.

RIVER RICHELIEU. Another ice pier has been built to afford additional protection to the city of Sorel during the run of ice in the spring.

On the RIVER YAMACHICHE a channel 2,500 feet in length was made through the obstruction caused by a land slide. The flooded lands are now relieved and the water brought to its normal stage.

SHIP CHANNEL—RIVER ST. LAWRENCE.—In January, 1889, the control and management of the work was assumed by this Department. During the winter extensive repairs were made to the dredging plant, which, on the opening of navigation, was placed to work at Cap à la Roche, Pouliet Rayer and Cape Charles, in deepening the channel at those points, which are adjacent to each other, to 27½ feet below low water, spring tides, and up to the close of the fiscal year a fair commencement had been made.

The channel which has been opened is 300 feet wide on the straight portions, and 320 feet wide at the bends, but it has been found difficult in many places to navigate large vessels, by reason of these bends, or the position of the channel where the "set of the current" has been crossed obliquely, and a further expenditure will have to be made to improve the channel at such points.

A full description of work done by the Harbour Commissioners of Montreal on the channel from the 1st December, 1888, will be found in the Report of the Commissioners, which is printed as Appendix No. 6, page 127.

At ST. ALPHONSE a slip has been built on the north side of the wharf, for the accommodation of small vessels.

At STE. ANNE DU SAGUENAY, timber required for the proposed wharf having been obtained during 1887-88, the work of construction was commenced during the past year, and a length of 77 feet built.

STE. ANNE DE SOREL. Another ice pier, 30 by 24 feet dimensions, 21 feet 6 inches in height, was built at the entrance to the Chenal du Moine, about 1½ miles below the village of Ste. Anne.

A part of the wharf at TADOUSSAC was re-built and raised 3 feet, a slip constructed and the flooring renewed.

At TROIS PISTOLES an extension of the wharf was commenced, but was not completed at the close of the fiscal year.

REPAIRS and IMPROVEMENTS were made to the wharves at BAIE ST. PAUL (Isolated Block), BERTHIER (EN BAS), CAP À L'AIGLE, CHICOUTIMI, MURRAY BAY, RIVIÈRE OUELLE, ST. ALPHONSE, ST. LAURENT (Island of Orleans.)

Dredging and other improvements to navigation were carried on at PAPINEAUVILLE, POINTE AUX ANGLAIS, PORT AU PERSIL, RAPIDE MANIGANCE (River St. Maurice), RIVIÈRE DU LOUP (EN BAS), RIVER L'ASSOMPTION, RIVER MEKINAC, RIVER RICHELIEU, RIVER ST. FRANCIS, ST. PLACIDE, and STE. ANNE DE LA PÉRADE. (Appendix No. 5, pages 87-97 and 115-117.)

PROVINCE OF ONTARIO.

PUBLIC BUILDINGS.

The expenditure on Public Buildings in this province for construction and repairs amounted to \$706,672.04.

ALMONTE. A contract was entered into 11th June, 1889, for the erection of a post office and building on a site obtained at the junction of Mill and Little Bridge streets. It is to have a main portion $2\frac{1}{2}$ stories and basement 51 feet by 31 feet and a one story annex 27 feet by 18 feet. Walls to be brick, with stone dressings, on stone foundations.

BRAMPTON. A contract for the construction of a Post Office, &c., building was entered into on 23rd October, 1888, and the works are now in progress.

It will consist of a brick three-story main portion, 47 feet by 42 feet on a stone foundation, with a one story brick building, 40 feet by 18 feet in the rear, and connected with the main building. The basement of the main building is to contain fuel and furnace rooms, the ground floor the Post Office, the first floor the Customs and Inland Revenue offices, and the attic the caretaker's quarters. The annex is to be for Weights and Measures and Examining Warehouse.

CAYUGA. The Post Office building which was described in my report of last year was completed, and supplied with a hot water heating apparatus, and is now being fitted up and furnished for occupation.

COBOURG. A contract for the erection of an addition to the Post Office, Custom House, &c., 18 ft. in width, by the depth and height of the present building, was entered into in December, 1888, and the work is in progress.

GANANOQUE.—The Post Office building described in my report of last year has since been completed, supplied with a hot water apparatus and fitted up for occupation.

GODERICH. Lot 5, containing half an acre, on the south side of West street, having been acquired as a site for Post Office, &c., building, on 12th November, 1888, a contract was entered into for the construction of a two and a-half story and basement building, 46 feet 6 inches by 34 feet, on plan, with a one story and basement stone annex, 34 feet by 14 feet 3 inches. The building is to consist on the ground floor of the Post Office and Examining Warehouse, on the first floor the Customs and Inland Revenue Offices, and in the attic will be the caretaker's apartments.

GUELPH.—The Post Office has been supplied with a hot water heating apparatus.

HAMILTON.—The Drill Shed has been completed and the Armories furnished with a hot water heating apparatus.

LINDSAY.—The building for the Post Office, Custom House and Inland Revenue, which was described in my report of last year, has since been carried on steadily. Plans were prepared and a contract entered into for the construction of a hot water heating apparatus.

NAPANEE.—Post Office, Custom House and Inland Revenue. The works in connection with this building, which was described in my report of last year, have been in steady progress. Plans, &c., have been prepared for a hot water heating apparatus.

OTTAWA.—Central Experimental Farm.

The following works, referred to in my report of last year, have been completed : Superintendent-General's residence; four residences for the staff officials; barn
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and stabling; museum and offices; heating apparatus for the residences, museum and offices.

Contracts have been entered into for the construction of a building for greenhouse and seed stores. The latter will be a one and a-half story brick building on a stone foundation, having a ground floor, containing a seed room, 24 feet by 17 feet; a potting room, 37 feet by 16 feet, and two rooms above. Adjoining the potting room are two greenhouses of wood, on a stone foundation, 80 feet 6 inches by 13 feet, and 80 feet 6 inches by 14 feet, respectively. A hot water heating apparatus has been put in, and the building is now occupied.

In August last a contract was entered into for the construction of a one and a-half story building, 100 feet by 30 feet, for a hennery, which was completed during the year.

On 23rd October a contract was entered into for the construction of a cottage, known as No. 1 cottage, near the barn, and a stable for the Superintendent, both of wood on stone foundations. The cottage will contain an unfinished basement; the ground floor to contain a parlor, a kitchen, a pantry, a storeroom and a shed; and the attic three rooms. The stable will contain a carriage room, stalls, a loose box, and a loft.

New Departmental Building, Wellington Street.—Specifications and drawings were prepared and tenders received for three passenger elevators and one freight elevator, which are now being erected; the iron staircase and heating apparatus were completed, and the building is being fitted up for occupation, and was so far advanced that the second floor was occupied by the Indian Department on the 1st May.

Parliament Building.—The roof covering of the Library was renewed in copper. Alterations were made in the quarters of the Speaker of the Senate, whereby two additional rooms were obtained.

The Printing Bureau is nearly completed, and is being fitted up.

PEMBROKE.—Post Office.—This building, described in my report of last year, is now in progress.

PRESCOTT.—The Post Office, Custom House and Inland Revenue Offices are in course of construction.

TRENTON.—The Post Office, &c., building described in my report of last year has been carried on nearly to completion, and is being fitted up with a hot water apparatus, and the fittings and furniture for the use of the officials of the various departments.

REPAIRS, ALTERATIONS and IMPROVEMENTS have been effected at the Post Office, &c., AMHERSTBURGH; Post Office, &c., BARRIE; Post Office, BELLEVILLE; Post Office, &c., CHATHAM and CORNWALL; KINGSTON, Penitentiary; Government House, OTTAWA; Departmental and Parliament Buildings, OTTAWA; Victoria Hall, OTTAWA; while the Parliament Grounds and Major's Hill Park were kept in good order. Various streets, under the control of the Department, were graded and macadamized, and otherwise improved, and the roadways, sidewalks and footpaths were kept clear of snow during the winter, St. THOMAS, Post Office, &c., TORONTO, Custom House, Examining Warehouse, Inland Revenue Offices and Post Office.

(Appendix No. 2, pages 31-38).

HARBOURS AND RIVERS.

Expenditure on Harbours and Rivers for construction and repairs, \$346,716.66

BELLEVILLE.—The contract for dredging in this harbour, which was entered into in 1886, was completed in July, 1889.

At COBOURG the outer 150 feet of the superstructure of the western pier was re-built under contract.

At KINCARDINE the work of re-building the wharfing around the inner basin is being continued.

KINGSTON.—During the past year 3,890 cubic yards of rock were blasted and removed from the Point Frederick Shoal.

LITTLE NATION RIVER.—Excavation through the rocky shoal at the mouth of Moose Creek, which obstructs navigation, has been continued, and a large amount of material removed.

OAKVILLE.—The western pier has been re-built from low water mark up.

PENENTANGUISHENE.—During 1888-89 a pile structure, 12 feet in width and 850 feet in length, was constructed in an average depth of 12 feet of water. Behind this structure an embankment 30 feet wide was formed with brush, stone and earth, giving to the wharf so completed a total width of 42 feet. In addition to this wharf, a similar structure, 350 feet in length, was built at the foot of Barrie street.

PORT ARTHUR.—In October, 1888, a contract was entered into for the construction of a further length of 1,500 feet of breakwater, with block piers at each end, to the westward of the work already completed, an opening of 350 feet being left between the old work and the new, to permit vessels to enter the port.

In May, 1889, operations on this new work were commenced, and up to the close of the fiscal year 300 feet had been constructed.

During the year a commencement was made to extend the talus of stone along the front of the work built under the first contract, it having been found that the bottom was eroding under the action of seas during heavy gales. It may here be mentioned that this breakwater has successfully withstood the force of breaking seas driven by gales travelling at the rate of 54 miles an hour, and also ice shoves from the outer bay, when the ice has been pushed completely over the structure and left remaining thereon to a height of 19 feet.

PORTSMOUTH.—Work was continued during the past fiscal year in the renewal of the upper 7 feet of this pier, and at its close it was well in hand.

RIVIÈRE AUX PUCES.—In September, 1888, a contract was entered into for the construction of 350 feet of close sheet-piling at the mouth of this river, 200 feet to be driven on the east side and 150 feet on the west side, to form a channel 40 feet in width, and at the close of the fiscal year the work was well under way.

SAULT STE-MARIE.—The extension of the Government wharf a length of 150 feet into the river to obtain increased shipping facilities was completed in June, 1889.

SOUTHAMPTON.—That portion of the landing pier which had been destroyed by fire was re-built from the water level.

At SUMMERSTOWN a warehouse 24 feet by 30 feet was built on the wharf for the accommodation of the public.

TORONTO.—In May, 1889, a contract was entered into for improving the eastern entrance, the works required consisting of the dredging a channel 300 feet in width to a depth of 12 feet below low water, the construction of protection works on either side of the new channel, and the continuation and completion of the harbour protection works on the eastern side of the proposed entrance—extending from Fisherman's Island westwardly to a junction with the channel works; and at the close of the year dredging was well under way.

The work of making good the stone slope in front of the Island works by a deposit of heavy stone was continued by day's labour.

REPAIRS and IMPROVEMENTS were effected to the works at COBOURG, PORT ALBERT, PORT HOPE, RONDEAU.

Dredging was carried on at BRIGHTON, GODERICH, KINCARDINE, KINGSVILLE, MEAFORD, PORT ELGIN, PORT HOPE, RIDEAU RIVER (North Branch), RIVER KAMINISTIGUIA, RIVER OTTAWA (channel between Pembroke and Petewawa), and SOUTHAMPTON. (Appendix No. 5, pages 98-106 and pages 115-117).

PROVINCE OF MANITOBA.

PUBLIC BUILDINGS.

During the year the sum of \$78,490.13 was expended on construction and repairs Public Buildings in this Province.

BRANDON.—A site for a Post Office, with a frontage of 96 feet on Rosser avenue, by a depth of 100 feet, was obtained, and on the 18th day of June last a contract was entered into for the construction of a building thereon. The building will comprise a main portion, 82 feet by 41 feet, to consist of a stone basement surmounted by three stories and an attic, in brick; and a one-story brick annex, 35 feet by 30 feet. On the ground floor will be the Post Office, the Examining Warehouse, the Gas Inspector's Office, and the Weights and Measures Office; on the first floor the Customs Office, Land Offices and vault; and on the second floor the Inland Revenue Offices and caretaker's apartments—the attic to be unfinished.

ST. PAUL'S.—On the 13th May, 1889, a contract was entered into for the construction of a school building, a laundry, a cow house, a stable, closets, &c.

School Building.—A "T" shaped $2\frac{1}{2}$ -story brick building, on a stone foundation, with wooden roof, floors and partitions, the front portion to be 80 feet by 33 feet 6 inches and the rear portion 33 feet 6 inches by 33 feet 6 inches. On the ground floor are to be two class rooms, two offices, a dining room, a kitchen, a scullery and a pantry; on the first floor two dormitories, nine bedrooms, and two wash and bath rooms, and in the attic eleven rooms.

Laundry.—A two-story wooden building, on a stone foundation, 24 feet by 20 feet.

Cow House.—A one-story wooden building, 28 feet by 24 feet.

Stable and Carriage House.—A one-story and loft wooden building, on a pile foundation, 33 feet by 21 feet.

STONY MOUNTAIN—PENITENTIARY.—In January, 1889, a contract was entered into for the erection of a residence for the surgeon, one for the Roman Catholic chaplain, and one for the Episcopal chaplain. In each case the building is to be a one and one-half story of brick, resting on stone foundation, with wooden partitions and roof. The basement will contain a dining room, a kitchen, a servant's room, a store and furnace room; the ground floor a parlor, a reception room, a library, a breakfast room, a bedroom, a bath room and a hat room; and the attic four bedrooms. Special drains, with cess pool, are being put in, as the distance to connect with the general system of drainage is too great. Wells are being sunk, one for each residence, by convict labour.

The Warden's stables have been completed, as has been the hospital building, while stables for the Deputy Warden have been constructed by convict labour.

REPAIRS, ALTERATIONS AND IMPROVEMENTS were carried out at **STONY MOUNTAIN PENITENTIARY**, and to the Custom House, Land's Office and temporary Post Office, **WINNIPEG**.

(Appendix No. 2, pages 38 and 39.)

HARBOURS AND RIVERS.

The RED RIVER.—The work of improving the navigation of the Red River, from Selkirk into Lake Winnipeg, by dredging, was continued, and much good work done.

The WHITE MUD.—During the first part of the fiscal year the channel was improved between Totogan and McArthur's Landing, and the bars which obstructed the navigation of the river were removed to such a width and depth as to permit boats to pass freely, after which work was resumed on the bar at the mouth of the river.

During the winter necessary repairs were made to the plant, which, on the opening of navigation, was placed to widen the channel between Totogan and McArthur's, after the completion of which work in the channel through the bar at the mouth was resumed, and was being proceeded with at the close of the fiscal year.

Had not dredging been done at the mouth and in the river itself, navigation would have ceased, owing to the extreme lowness of the water which has prevailed during the past two years. (Appendix No. 5, pages 106, 107, 117 and 118.)

NORTH-WEST TERRITORIES.

PUBLIC BUILDINGS.

Expenditure for construction and repairs on Public Buildings \$147,998.26.

CALGARY.—The barracks building referred to in my report of last year is nearly complete, the mess-room being now occupied as a dormitory, and the hospital is complete ready for occupation.

On the 8th November 1888, a contract was entered into for the construction of a two-story stone Court House, having brick partitions and wooden floors and roof, and
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measuring 91 feet by 51 feet on plan. On the ground floor are to be rooms for sheriff, grand jury, barristers, witnesses, jailers and prisoners; a vault, water closets, a furnace room, and a fuel room—the two last mentioned going from the ground floor ceiling to below the level of the ground. On the first floor are the court room, rooms for judges, barristers and jury, and water closets.

INDIAN HEAD.—On 5th November, 1888, a contract was entered into for the construction of buildings in connection with the Experimental Farm, viz.:—

Superintendent's Residence.—A wooden two-story building, with a stone basement, the main building 42 feet by 34 feet, and a kitchen wing 24 feet by 21 feet.

Horticulturist's Residence.—A wooden two-story building, 32 feet by 35 feet, on a stone basement, with a lean-to summer kitchen, 25 feet by 10 feet in the rear.

Workmen's Cottage.—A wooden one and a-half story cottage, 27 feet by 21 feet, on a stone basement, with a lean-to summer kitchen, 14 feet by 10 feet, in the rear.

Barn and Stabling.—These are to be of wood, and consist of a main building 111 feet by 50 feet, 40 feet in height, on a 12 feet stone basement, and a wing 65 feet by 32 feet, and 32 feet in height. The basement is arranged to accommodate horned cattle and horses, the ground floor as a driving floor, and for hay storage.

MACLEOD.—The stable for the use of the Police, for the construction of which a contract was entered into in November, 1888, has been completed. It consists of a main portion, 131 feet 6 inches by 29 feet 6 inches, containing fifty one stalls, and a harness or saddle room, 40 feet by 14 feet, adjoining. Over the main portion is a low loft.

QU'APPELLE.—Industrial School.—The girls' school, bake-house and carpenter's shop are completed.

REGINA.—A hot air furnace—with connections,—was placed in the basement of the Court House.

On 14th May, 1889, a contract was entered into for the construction of an Industrial School at White Farm, near Regina, which is now in course of erection. The building is to be "T" shaped, and consist of a front portion, 180 feet by 37 feet, with a rear wing 75 feet by 37 feet.

On 19th March, 1889, a contract was entered into for the erection of a new residence for the Lieutenant Governor. The building will be of brick on a stone foundation, with partitions, floors and roofs of wood, to consist of a main portion 64 feet 6 inches by 55 feet, and that for servants, offices and bedrooms 56 feet by 42 feet.

On 3rd November, 1888, a contract was entered into for the erection of a riding hall, to replace that destroyed by fire, and the work is in progress. The building will be of wood, 125 feet by 210 feet, exclusive of the porches. (Appendix No. 2, pages 39 to 42.)

PROVINCE OF BRITISH COLUMBIA.

PUBLIC BUILDINGS.

Expenditure during the fiscal year, \$17,099.08.

KAMLOOPS.—On the 4th June, 1889, a contract was entered into for the construction of three wooden buildings, on stone foundations, for the Indian Industrial School, viz.:

Central Building.—To consist of a main building, 31 feet by 34 feet, and an annex 25 feet by 18 feet; to contain on the ground floor a large dining room, a Superintendent's sitting room, a Superintendent's office, a kitchen and a hall; and on the first floor two school rooms, a sick room, a Superintendent's bedroom and closets.

Boy's Building.—A building, 40 feet 9 inches by 33 feet 6 inches, to contain on the ground floor a boys' play-room, a dormitory, a tailor's room, a teacher's room, a lavatory, two bath-rooms and a hall; and on the first floor two boys' dormitories, a teacher's bedroom, a spare room, a passage and closets.

Girls' House.—A building 30 feet 6 inches by 22 feet, to contain on the ground floor a laundry, an ironing room and a drying room; and on the first floor two girls' dormitories, a servants' bedroom and closets.

KUPER ISLAND.—A contract for the erection of buildings for the Indian Industrial School, similar to those described above for Kamloops, was entered into on 27th May, 1889.

NEW WESTMINSTER—Penitentiary.—On the 23rd April, 1889, a contract was entered into for the construction of a two-story wooden building, on a stone foundation, to be used as a residence for the Warden of the Penitentiary. This will have a main building 55 feet by 48 feet, and a wing 30 feet 6 inches by 20 feet, containing on the ground floor drawing-room, dining-room, library, bedroom, hall, kitchen, scullery, pantry and conservatory, and on the first floor seven bedrooms, bath-room and hall.

The dwelling for single officers, referred to in my report of last year, has been completed, grates and stoves, &c., supplied. A cow-house was built by convict labor. Gas was laid throughout the grounds, cast-iron lamp posts placed in position and several extra lights placed in the main building. Various alterations and improvements were made in other parts of the buildings.

VANCOUVER.—A site for a Post Office, &c., Building—on the corner of Penden and Granville streets—with frontages of 130 and 75 feet respectively, has been offered, and plans and specifications are being prepared.

REPAIRS, ALTERATIONS and IMPROVEMENTS were effected at the Post office NANAIMO, Public Building, NEW WESTMINSTER, and at the Custom House and Post Office, VICTORIA. (Appendix No. 2, pages 42 and 43).

HARBOURS AND RIVERS.

Expenditure during the fiscal year, \$60,849.60.

BIGG'S PORTAGE.—The channel opened in 1887, through the neck of land, known as Bigg's Portage, was widened and deepened, and its usefulness increased thereby.

THE COLUMBIA RIVER.—To improve the navigation of this river a channel has been scraped through the salmon beds, just below the lower lake, stone and brush-dams have been built where required, and wing-dams constructed at the widest and shallowest points, and at bends, to confine the water and cause a scour. Many snags and other obstructions were removed.

THE COQUITLAM.—Jams and accumulations of trees and driftwood caused the river to overflow, and adjacent lands were thereby damaged. These were removed with satisfactory results.

ESQUIMALT DRY DOCK.—The electric light apparatus has been completed, a lathe and drill supplied for repairs, a small centrifugal pump substituted for the auxiliary and drainage pump. Additional latrines and proper houses for the fire-hose carts have been built, and other necessary work done.

The dock was fully occupied. Two of Her Majesty's ships—the "Cormorant" and the "Icarus," the U. S. lighthouse tender "Margarita," one ship, three barques, one schooner and ten steamers having been docked and repaired.

THE FRASER.—The work of improving the navigation of this important river by the construction of dams to deflect the current into the main channel has been continued and has proved successful. The north channel has been both straightened and deepened thereby, and it is anticipated that there will soon be a continuous depth of 19 feet, at low water springs, through the banks. The snag boat "Samson" removed a number of snags and jams from the river.

HARRISON RIVER.—A number of guide piles were driven, to assist vessels in passing through the draw of the railway bridge.

NICOL ROCK—Nanaimo Harbour.—The removal of this rock, which was a source of danger to shipping, was commenced in 1887, since which time work has been actively carried on. Up to 30th June last more than two-thirds of the area of the rock within the 16 feet contour line has been broken up, and 1,800 tons of material removed and landed.

THE NICOMEKEL.—A small amount has been expended in the removal of snags and other work to the eastward of the Clover Valley Road, thus permitting small boats and scows to get nearly up to Langley Prairie.

THE SERPENTINE.—The ditch, which was cut in 1887-88, and to which reference was made in my report of last year, has been enlarged to double its former capacity, and has proved of much benefit.

THE SOMAS.—During the past year 47 snags were removed from the channel of the river, and many overhanging trees were cut away between the mouth and the landing, which have increased the facilities for navigation; and the remains of an old mill dam near Sproat's Lake, which caused the adjoining lands to be overflowed, were removed.

VICTORIA HARBOUR.—The entrance to this harbour is very narrow, with a sharp turn after passing the lighthouse, due to a shoal extending from Shoal Point. During the year the compact mass of boulders forming this shoal was operated on first by dynamite, and then by a heavy rake, after which the dredge "Pacific" was able to work freely through the shoal.

The work done has resulted in deepening and straightening the channel, and soon the "red" buoy marking the right side of the channel coming in will be shifted, when there will be a channel 300 feet in width, with an easy turn, and an almost straight course from the lighthouse to the wharves in front of the city, having a depth of not less than 14 feet at low water, spring tides, which have a range of 10 feet, there being at the entrance to the harbour a depth of 21 feet at high water, neap tides, 23 feet at ordinary spring tides, and 24 feet at the extraordinary tides which occur in December. (Appendix No. 5, pages 107, 111 and 118).

DREDGES.

A report on the operations of the various dredges, together with a list of the dredging plant belonging to the Department, will be found in Appendix No. 5, pages 112 and 123.

ENGINEERS, ENGINEMEN, FIREMEN AND CARETAKERS.

A list of the various engineers, &c., employed in the Public Buildings throughout the Dominion, with salaries paid them, &c., will be found in Appendix No. 3, pages 46, 47, 48.

DOMINION BUILDINGS.

The amounts expended in connection with heating, lighting and water of the various Public Buildings throughout the Dominion will be found in Appendix No. 1, pages 10 and 13.

PUBLIC BUILDINGS, OTTAWA.

The heating, electric lighting, gas, water and bell services of the various Public Buildings in Ottawa were efficiently maintained, ordinary maintenance—only—as a rule, being required. (Appendix No. 4, pages 51 and 52).

SURVEYS AND EXAMINATIONS.

Surveys and examinations were made at 99 places, a list of which will be found in Appendix No. 5, page 111.

SLIDES AND BOOMS.

SAGUENAY DISTRICT.

The slide and booms to facilitate the descent of timber from Lake St. John to the River Saguenay are situated on La Petite Décharge, the smaller of the two outlets from the lake to the river. The slide is 5,840 feet long, and the booms 1,344 feet.

Dam No. 3 was rebuilt, and the anchor pier at the head of the slide lengthened 91 feet. The main boom and slide-master's house were repaired. (Appendix No. 8, page 137).

ST. MAURICE DISTRICT.

The works on the St. Maurice are situated at seven stations, from the mouth of the river to La Tuque Falls, a distance of 100 miles; and there are also two stations on the Vermillion River, a tributary of the St. Maurice.

Although the river remained at a high level for a longer period than usual, the works were not seriously damaged, owing to a large force of men being kept constantly employed. The quantity of logs brought down the river was about the same as last year. The usual necessary repairs were effected to the works at the different stations. (Appendix No. 9, pages 141 and 142).

OTTAWA DISTRICT.

This district embraces the River Ottawa and its tributaries, the Gatineau, Madawaska, Coulonge, Black, Petewawa and Dumoine Rivers. There are on it eighty three stations, and the works for facilitating the descent of timber aggregate about one mile of canal, over three miles of slides, nearly thirteen miles of booms and over seventeen thousand lineal feet of dams, with bulkheads, piers, glance piers, &c., in proportion.

During the summer months of 1888 the waters of the main river and the streams falling into it, although low, were at a fair pitch for driving; but later in the season, portions of the timber and sawlogs were stuck, and had to be abandoned until the water rose. In all 127,923 pieces of timber and 3,725,386 sawlogs were brought down, the revenue derived from the same being \$84,709.39.

A description of work done at the various stations will be found in Appendix No. 10, pages 145-149.

NEWCASTLE DISTRICT.

The works in this district are of two classes: those connected with navigation, which are under the control of the Department of Railways and Canals, and those constructed to facilitate the descent of timber down the River Trent and its tributaries, which are under the control of this Department.

During the season of 1888 the water stood at its average height. This spring it was low, but through the care taken of the water in the reservoirs, and the heavy rains of May and June, the lumbermen experienced little difficulty with their drives.

A description of the works executed at the different stations will be found in Appendix No. 11, pages 153 and 154.

STAFF EMPLOYED ON SLIDES AND BOOMS .....	xxx

A list of the staff employed on the different slides and booms, with date of appointment, salary, &c., will be found in Appendix No. 12, pages 156-158.

BRIDGES.

BATTLEFORD BRIDGE.—No progress was made by the contractors, beyond arranging for materials.

CHAUDIÈRE BRIDGE. The suspension bridge at the Chaudière Falls having become inadequate for the large amount of traffic passing over it, in November 1888, a contract was entered into for the construction of an iron and steel truss bridge, 236 feet in length and 45 feet in width, from outside to outside, giving a clear roadway of 30 feet and two foot paths, one on each side, of 5 feet.

At the close of the fiscal year the contractors were engaged in erecting the false works, and in the delivery of materials for the new structure.

PORTAGE DU FORT BRIDGE.—The superstructure of the bridge crossing a branch of the Ottawa, at the village of Portage du Fort, has been entirely rebuilt.

TELEGRAPHS.

The various lines owned and operated by the Government, or on behalf of the Government were maintained in a state of efficiency during the year.

The Meat Cove Line was further renewed, and a loop of 5 miles constructed from the Mabou-Cheticamp line to North East Margaree. The line on the north shore of the St. Lawrence was extended from Birch River to Sheldrake, and the cables of the Grosse Ile Quarantine system were taken up and replaced by cables of a heavier type. In August, 1888, Point Pelée was connected with Pelée Island, Lake Erie, by a cable $8\frac{3}{4}$ miles in length, and connection was made with Leamington, the line being equipped with telephones. Two short sections of cable were laid to connect Wolfe and Howe Islands with Kingston by telephone. The re-poling of the Qu'Appelle-Humbolt line has been completed, as was that of the Prince Albert line, and a loop line was built to Batoche. The line between Clark's Crossing and Saskatoon, 14 miles in length, has been assumed by the Government, and now forms part of the system in the North-West Territories. A telephone system was established between the Mounted Police Barracks and the Government offices at Banff. A line from Victoria to Cape Beale, a distance of about 115 miles, is now in course of construction along the south shore of Vancouver Island. Full details, with tables giving distances, names of operators and salaries paid on the different lines, will be found in the report of the Superintendent of Government Telegraph Lines. (Appendix 13, pages 161–180).

SHIP CHANNEL BETWEEN MONTREAL AND QUEBEC.

The work of deepening to $27\frac{1}{2}$ feet the channel in the St. Lawrence between Montreal and Quebec was continued by the Harbour Commissioners of Montreal to the 31st December, 1888, after which date it was assumed and has been carried on by the Department. A description of the work done from 1st July to 31st December, 1888, will be found in Appendix No. 6, pages 127–130.

QUEBEC HARBOUR IMPROVEMENTS.

The report of the Harbour Commissioners of Quebec on the works under their charge will be found in Appendix No. 7, page 133.

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OPENING AND CLOSING OF NAVIGATION.

Appendix No. 14, pages 183-184, gives a statement of the dates of the closing of navigation in the winter of 1888, and of the opening in 1889, at the principal ports of Canada. A list of the ports which are always open is also given.

NATIONAL ART GALLERY.

Some additions have been made to the pictures during the year, and the curator reports a steady increase in the number of visitors. (Appendix 17, page 203.)

CONTRACTS, PROPERTY PURCHASED, &c.

Appendix No. 15, pages 187-192, contains statements of the contracts entered into by the Department, of property purchased by the Department, and of property leased by or to the Department, during the fiscal year.

ACTS RELATING TO PUBLIC WORKS

Appendix No. 16, page 199, contains a list of some of the Public Acts of the Parliament of Canada, passed at the Session of 1889, and having reference to the Public Works Department, or works under its charge.

DEPARTMENTAL STAFF.

In appendix No. 18, pages 206 and 207, will be found a list of the Members, Commissioners, and Assistant Commissioners of the Board of Works of the Province of Canada from 1841 to 1867; and of the Ministers, Deputy Ministers, Secretaries, Chief Engineers and Chief Architects of the Department of Public Works, from Confederation to 30th June, 1889.

OFFICIAL CORRESPONDENCE.

Appendix No. 20, page 247, contains a statement of the official correspondence of the Department from 1867 to 30th June, 1889, as well as that of the principal officers of the Department.

GRAVING DOCKS.

There are at present three graving, or dry docks, opened for the reception and repairs of ocean-going steamers and vessels, viz. at Halifax, Nova Scotia; Levis, Quebec; and Esquimalt, British Columbia, while a fourth, to accommodate vessels engaged in the lake trade, is under construction at Kingston, Ontario. Their dimensions are as follows:—

HALIFAX :

	Feet.
Length.....	585
Width at coping level.....	102
do bottom.....	72
do entrance.....	95 $\frac{1}{4}$
Depth of water on sill at ordinary spring tides.....	30
(Spring tides rise 6 feet, neaps 3 feet.)	

LEVIS :

	Feet.
Length.....	495
Width at coping level.....	100
do bottom.....	73
do entrance.....	62
Depth of water on sill at H.W. ordinary spring tides.....	25½
do do neap tides.....	20½

ESQUIMALT DOCK :

	Feet.
Length.....	430
Width at bottom.....	41
do coping level.....	90
do entrance.....	65
Depth of high water on sill at high water ordinary springs.....	26½
(Spring tides rise 7 to 10 feet, neaps 5 to 8 feet.)	

KINGSTON DOCK .

When completed, this dock will be of the following dimensions:—

	Feet.
Length on the floor.....	280
Width do	40
Width at coping level.....	72
Depth from coping to floor.....	26
Depth of water on sill at low water.....	15½
Width of entrance.....	48

ENGINEERS AND ASSISTANTS.

Appendix No. 19, pages 209, 247, contains a revised record of engineers and their assistants employed on Public Works of Canada from 1779 to 1890.

COLLECTION OF SLIDE AND BOOM DUES.

Appendix No. 21, pages 250, 251, contains a statement of amounts owing for slide and boom dues in the Ottawa District on 1st December, 1889 ; also, amounts due by insolvent parties which cannot be recovered.

HECTOR L. LANGEVIN.
Minister of Public Works.

OTTAWA JANUARY, 1890.

APPENDICES.

APPENDIX No. 1.

STATEMENT OF EXPENDITURE

DURING FISCAL YEAR ENDED 30th JUNE, 1889.

Y

O. DIONNE, ACCOUNTANT.

(Reference No. 104,040.)

APPENDIX No. 1.

STATEMENT showing the Amount expended by the Department of Public Works,
Dominion of Canada, during the Fiscal Year ended 30th June, 1889.

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
GENERALLY.....			11,331 33	11,331 33
Nova Scotia.				
Amherst Post Office, &c.....	176 05	187 72		363 77
Annapolis do	4,134 69			4,134 69
Antigonish do	641 85	203 28		845 13
Arichat do		48 55		48 55
Baddeck do		278 53		278 53
Halifax Dominion Building.....	788 78	100 00		888 78
do Examining Warehouse.....	691 66	1,000 00		1,691 66
do Immigration Office.....		257 29		257 29
do Penitentiary.....		0 24		0 24
do Quarantine Station.....		1,268 31		1,268 31
Nappan Experimental Farm.....	11,218 44			11,218 44
New Glasgow Post Office, &c.....	150 00	401 00		551 00
North Sydney do	576 97	130 27		707 24
Pictou Marine Hospital.....	187 50			187 50
do Post Office, &c.....		258 80		258 80
Sydney (South) Post Office, &c.....	1,589 92			1,589 92
Truro Post Office, &c.....		34 58		34 58
Windsor do		20 00		20 00
Yarmouth do	607 00	483 64		1,090 64
Prince Edward Island.				
Charlottetown Dominion Building (new).....	1,267 32	119 00		1,386 32
Montague Post Office, &c.....	21 10	135 31		156 41
Summerside do	233 25	36 19		269 44
New Brunswick.				
Bathurst Post Office, &c.....	1,998 44			1,998 44
Carleton (St. John) Post Office.....		73 33		73 33
Chatham Post Office.....		118 98		118 98
Dalhousie Post Office, &c.....	6,051 55			6,051 55
Dorchester Penitentiary.....	42 74	500 00		542 74
Fredericton Post Office, &c.....		1,132 17		1,132 17
Kingston Marine Hospital.....		1 80		1 80
Moncton Post Office, &c.....		477 03		477 03
Newcastle do	57 50	87 90		145 40
Portland (St. John) Post Office.....		133 96		133 96
St. Andrew's Savings Bank.....		22 50		22 50
St. John Custom House.....	2,267 04	1,107 44		3,374 48
do Marine Hospital.....	681 32	454 90		1,136 22
do Penitentiary.....		17 21		17 21
do Post Office.....	329 56	480 14		809 70
do Savings Bank.....	262 11	99 18		361 29
St. Stephen's Post Office, &c.....		11 80		11 80
Sussex do		213 00		213 00
Woodstock do	3,052 00	5 70		3,057 70
Carried forward.....	37,026 79	9,899 75	11,331 33	58,257 87

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	37,026 79	9,899 75	11,331 33	58,257 87
PUBLIC BUILDINGS—<i>Continued.</i>				
<i>Quebec.</i>				
Aylmer Post Office, &c.....	9,963 08			9,963 08
Chicoutimi Marine Hospital.....		1,282 09		1,282 09
Coaticook Post Office, &c.....	23,522 57			23,522 57
Grosse Isle Quarantine Station.....	2,230 13			2,230 13
Hull Post Office, &c., (new).....	930 72	3 85		934 57
Joliette Post Office, &c.....	13,803 06			13,803 06
Lachine do.....	2,108 40			2,108 40
Montreal Armouries.....	28,671 66			28,671 66
do Civil Service Examination Office.....		154 00		154 00
do Custom House.....	5,111 90	4,724 85		9,836 75
do Drill Hall.....	18,365 48	108 85		18,474 33
do Examining Warehouse.....	521 55	442 47		964 02
do Inland Revenue Building.....	696 00	494 21		1,190 21
do Post Office.....	5,953 49	9,780 36		15,733 85
do do —electric lighting.....			719 92	719 92
Quebec Citadel Buildings.....		3,614 29		3,614 29
do Citadel Cliff.....	1,279 64			1,279 64
do Clerk of Works' Office.....		665 09		665 09
do Cullers' Office.....		143 66		143 66
do Custom House (old).....		20 00		20 00
do do.....	3,256 49	24 10		3,280 59
do Drill Hall.....	1,964 26			1,964 26
do Examining Warehouse.....	739 38	45 60		784 98
do Immigrant Building.....	7,693 56			7,693 56
do Marine Hospital.....		2,959 34		2,959 34
do Observatory.....	340 46			340 46
do Old Parliament Building.....		398 01		398 01
do do site.....	76,296 22			76,296 22
do Post Office.....		3,363 28		3,363 28
do Queen's Wharf Buildings.....	1,454 05	219 30		1,673 35
Rivière du Loup (Fraserville) Post Office.....	3,570 65			3,570 65
Sherbrooke Post Office, &c.....	594 18	42 50		636 68
Sorel Post Office, &c.....	839 23	66 55		905 78
St. Hyacinthe Post Office, &c.....	4,250 23			4,250 23
St. Jérôme do.....	10,471 44			10,471 44
St. John's do.....		364 60		364 60
St. Régis Custom House.....		290 00		290 00
St. Vincent de Paul Penitentiary.....	33,864 19			33,864 19
Three Rivers Custom House.....	885 81	251 44		1,137 25
do Post Office.....	422 52	155 20		577 72
<i>Ontario.</i>				
Almonte Post Office, &c.....	6,666 98			6,666 98
Amherstburg Post Office, &c.....		46 15		46 15
Barrie do.....	2,762 41			2,762 41
Belleville do.....	637 04	52 75		689 79
Berlin do.....		90 62		90 62
Brampton do.....	10,527 17			10,527 17
Brantford do.....	229 02	109 23		338 25
Brockville do.....	23 75	67 45		91 20
Cayuga do.....	9,140 90			9,140 90
Chatham do.....	245 37	276 71		522 08
Clifton do.....		13 78		13 78
Cobourg do.....	5,750 34	15 00		5,765 34
Cornwall do.....		178 06		178 06
Carried forward.....	332,810 12	40,363 14	12,051 25	385,224 51

APPENDIX No. 1.—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	332,810 12	40,363 14	12,051 25	385,224 51
PUBLIC BUILDINGS—Continued.				
<i>Ontario—Continued.</i>				
Dundas, Post Office, &c.....		500 00		500 00
Galt do		204 90		204 90
Gananoque do	7,195 95			7,195 95
Goderich do	6,599 88			6,599 88
Guelph do	1,932 46	21 22		1,953 68
Hamilton Custom House		72 00		72 00
do Drill Hall	23,633 44			23,633 44
do Post Office	557 34	525 81		1,083 15
Kingston Civil Service Examination Office		18 45		18 45
do Custom House	1,493 91	724 57		2,218 48
do Military College		38 00		38 00
do Penitentiary	22,244 87			22,244 87
do Post Office		331 78		331 78
Lindsay Post Office, &c.....	14,599 19			14,599 19
London Custom House	11,796 09	16 40		11,812 49
do Infantry School	11,560 63	70 00		11,630 63
do Post Office, &c.....	330 19	416 31		746 50
Napanee do	24,315 55			24,315 55
Orangeville do	30 76	25 06		55 82
Ottawa Examining Warehouse.....		850 00		850 00
do Experimental Farm.....	64,650 33			64,650 33
do Geological Museum.....		390 75		390 75
do do do Gas.....			699 40	699 40
do National Art Gallery			1,000 97	1,000 97
do Post Office, &c	832 50	165 40		997 90
do do Gas			1,770 40	1,770 40
do Printing Bureau.....	122,534 86			122,534 86
do do Gas.....			1,318 10	1,318 10
do do Heating			981 36	981 36
do do (temporary)		587 50		587 50
do Public Buildings		118,372 10		118,372 10
do do Gas			15,777 88	15,777 88
do do Grounds			8,293 55	8,293 55
do do Heating.....			61,177 83	61,177 83
do do Major's Hill Park			7,550 61	7,550 61
do do Recovering lean-to Roofs	5,920 00			
do do Ventilating Shafts	800 00			
do do Skylights	771 25			
do do Pump House	149 00			
do do Removal of Snow			991 73	991 73
do do Telephonic Service			2,844 02	2,844 02
do do Water.....			13,728 60	13,728 60
do do Wellington Street Block	132,151 27			132,151 27
do Supreme Court.....		50 50		50 50
do Victoria Hall.....	1,000 00	3,848 19		4,848 19
Pembroke Post Office, &c.....	9,094 31			9,094 31
Peterborough do	2,204 56	22 35		2,226 91
Port Arthur Custom House		194 00		194 00
do Inland Revenue Office		199 82		199 82
Port Colborne Post Office, &c.....		180 25		180 25
Port Hope do	21 50	156 25		177 75
Prescott do	8,027 00			8,027 00
Rideau Hall		31,518 31		31,518 31
do Gas—New Edinburgh Street Lamps.....			300 00	300 00
do Allowance for fuel and light.....			8,000 00	8,000 00
do Removal of Snow			617 00	617 00
Carried forward	807,256 96	199,863 06	137,102 70	1,144,222 72

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward	807,256 96	199,863 06	137,102 70	1,144,222 72
PUBLIC BUILDINGS—Continued.				
<i>Ontario—Concluded.</i>				
St. Catharines Post Office, &c.	526 39	1 00		527 39
St. Thomas do	904 16			904 16
Stratford do		153 00		153 00
Strathroy do	2,611 93			2,611 93
Toronto Civil Service Examination Office		105 47		105 47
do Custom House	1,561 41	17 18		1,578 59
do Examining Warehouse	4,115 84	690 08		4,805 92
do Immigrant Station	14 66	293 46		308 12
do Inland Revenue Office		24 25		24 25
do Post Office	4,307 72	509 61		4,817 33
Trenton do &c.	18,640 45			18,640 45
Windsor do	1,508 29	7 65		1,515 94
<i>Manitoba.</i>				
Brandon Experimental Farm	4,202 78			4,202 78
do Immigrant Building	153 40	116 00		269 40
do Post Office	6,722 00			6,722 00
Stony Mountain Penitentiary	53,435 84			53,435 84
St. Paul Industrial School	9,222 10			9,222 10
Winnipeg Architect's Office		1,592 56		1,592 56
do Custom House		122 35		122 35
do Dominion Lands Office		1,141 42		1,141 42
do Examining Warehouse		809 49		809 49
do Immigrant Building	47 16	590 00		637 16
do Post Office		335 03		335 03
<i>North-West Territories.</i>				
Banff Mounted Police Barracks	380 35			380 35
Battleford Land and Registry Office	1,999 64			1,999 64
do Mounted Police Barracks	8,509 32			8,509 32
Big Bend do do	411 12			411 12
Calgary Clerk of Work's Office		98 85		98 85
do Court House, Jail, Registry Office, &c.	10,258 90			10,258 90
do Custom House		81 50		81 50
do Mines Office		393 03		393 03
do Mounted Police Barracks	25,856 02			25,856 02
Fort McLeod Custom House		380 80		380 80
do do and Store house	2,013 11			2,013 11
do Mounted Police Barracks	8,906 03			8,906 03
Fort Saskatchewan do	200 00			200 00
Indian Head Experimental Farm	14,337 50			14,337 50
Kipp Mounted Police Barracks	979 93			979 93
Lethbridge do	4,543 31			4,543 31
Maple Creek do	917 34			917 34
Medicine Hat do	127 59			127 59
Milk River do	121 66			121 66
Pendant d'Oreille do	291 90			291 90
Prince Albert Court House	3,541 33	227 89		3,769 22
do Mounted Police Barracks	5,658 43			5,658 43
Public Buildings generally		1,443 48		1,443 48
Qu'Appelle Immigrant Shed		10 60		10 60
do Industrial School	11,562 49			11,562 49
Regina Clerk of Works' Office		886 86		886 86
Carried forward	1,015,847 06	209,894 62	137,102 70	1,362,844 38

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	1,015,847 06	209,894 62	137,102 70	1,362,844 38
PUBLIC BUILDINGS—Continued.				
<i>North-West Territories—Concluded.</i>				
Regina Council Chamber		578 00		578 00
do Court House.....	333 50	189 81		523 31
do Industrial School.....	4,872 54			4,872 54
do Jail and Lunatic Asylum.....	1,887 53	169 88		2,057 41
do Lieut.-Governor's Residence, (old).....	2,549 89	2,594 03		5,143 92
do do do (new).....	2,651 54			2,651 54
do Mounted Police Barracks.....	9,269 52			9,269 52
do Post Office.....		215 85		215 85
do Riding Hall.....	15,301 14			15,301 14
St. Albert Mounted Police Barracks.....	642 42			642 42
St. Mary's do	1,155 83			1,155 83
Wood Mountain do	1,155 90			1,155 90
Writing-on-Stone do	291 90			291 90
<i>British Columbia.</i>				
Agassiz Experimental Farm.....	72 05			72 05
Kamloops Industrial School.....	65 66			65 66
Kuper Island do	3,055 59			3,055 59
Nanaimo Post Office, &c.....		72 12		72 12
New Westminster Penitentiary.....	8,041 55			8,041 55
do do Post Office.....		295 74		295 74
Vancouver Post Office, &c.....	4,154 36			4,154 36
Victoria Custom House.....		121 55		121 55
do do Post Office.....		1,220 46		1,220 46
<i>England.</i>				
London, High Commissioner's House.....	964 57			964 57
Carried forward	1,072,312 55	215,352 06	137,102 70	1,424,767 31

APPENDIX No. 1—Continued.

Name of Work.				Con- struction.	Repairs.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS—Continued.				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....				1,072,312 55	215,352 06	137,102 70	1,424,767 31
EXPENDITURE ON ACCOUNT SERVICES MENTIONED.				Heating.	Lighting.	Water.	Total.
Nova Scotia.							
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Amherst Post Office.....	433 33	26 61	479 04	132 55			1,071 53
Antigonish do.....	45 00		67 50				112 50
Arichat do.....	15 00		95 00				110 00
Baddeck do.....	200 00		98 00	25 64			323 64
Halifax Dominion Building	2,196 96	32 32	635 10	1,968 28	650 00		5,482 66
do Exam. Warehouse	500 00		4 80	19 00	284 85		808 65
do Penitentiary.....	112 50		18 60	8 40			139 50
New Glasgow Post Office.	399 99	45 00	151 00	235 09	133 33		964 41
North Sydney do.....	433 31		185 00				618 31
Pictou Custom House.....	400 00	0 70	149 33				550 03
do Marine Hospital.....			61 72				61 72
Truro Post Office.....	399 99	7 26	194 50	223 47	15 00		840 22
Windsor do.....	400 00		226 68	105 30	50 00		781 98
Yarmouth Post Office, &c.	400 00	2 49	200 00	535 36	72 00		1,209 85
Prince Edward Island.							
Charlottetown Dominion Building.....	1,579 96	110 19	551 78	1,623 18	27 00		3,892 11
Montague Post Office.....	120 00		74 87	11 67			206 54
Summerside do.....	400 00	12 94	297 91	52 30			763 15
New Brunswick.							
Bathurst Post Office, &c..	400 00	4 80	401 01	24 96			830 77
Carleton, St. John, Post Office, &c.....				150 00	20 00		170 00
Chatham Post Office, &c..			149 03	64 90			213 93
Fredericton do.....	400 00	8 35	393 57	456 12	33 00		1,291 04
Moncton Post Office.....	400 00	18 09	265 93	706 31	134 00		1,524 33
Newcastle do.....	400 00	59 48	424 49	214 20			1,098 17
Portland do.....			30 44	15 21			45 65
St. John Custom House..	1,715 80	45 78	1,905 19	165 97	457 87		4,290 61
do Marine Hospital.....			507 33	312 60	30 58		850 51
do Penitentiary.....	412 50		49 60	6 25			468 35
do Post Office.....	1,195 85	3 26	606 93	1,973 79	351 13		4,130 96
do Savings Bank.....			231 25	94 45	70 00		395 70
St. Stephen's Post Office, &c	400 00	15 32	81 00	501 90	51 75		1,049 97
Sussex do.....	400 00	2 01	221 57	20 20			643 78
Woodstock do.....	400 00	8 40	255 17	42 00	34 00		739 57
Quebec.							
Hull Post Office, &c.....	200 00		284 21	36 80	89 00		610 01
Montreal Armouries.....	225 00						225 00
do Custom House.....	930 00		1,233 43	572 65	375 35		3,111 43
do Drill Hall.....	323 75						323 75
do Examining Ware- house.....	1,257 42		1,903 20	462 04	450 00		4,072 66
do Inland Revenue Office.....	730 00		335 51	151 85	96 90		1,314 26
Carried forward.....	17,826 36	403 00	12,769 69	10,912 44	3,425 76	45,337 25	

APPENDIX No. 1—*Continued.*

Name of Work.				Con- struction.	Repairs.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS— <i>Continued.</i>				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....				1,072,312 55	215,352 06	137,102 70	1,424 767 31
EXPENDITURE ON ACCOUNT SERVICES MENTIONED— <i>Con.</i>	Salaries of Engineers, &c.	Supplies for En- gineers, &c.	Heating.	Lighting.	Water.	Total.	
<i>Quebec</i> —Concluded.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
Brought forward...	17,826 36	403 00	12,769 69	10,912 44	3,425 76	45,337 25	
Montreal Post Office, St. Jacques St.....	1,195 00	0 60	1,231 27	3,451 07	1,639 45	7,517 39	
Montreal Post Office, Notre Dame St.....				0 45		0 45	
Montreal Post Office, St. Catherine St.....				2 85	8 00	10 85	
Montreal Post Office, St. Lawrence St.....				2 05		2 05	
Quebec Citadel Buildings. do Culler's Office.....	22 25		166 50	264 78		453 53	
do Custom House.....	540 00					540 00	
do Examining Ware- house.....	300 00	9 85	937 65	27 68	30 00	1,305 18	
do Marine Hospital.....	1,070 00	25 55	1,026 31	24 00	300 00	2,445 86	
do Observatory.....			1,375 00			1,375 00	
do Post Office.....			378 88	609 84		988 72	
Sherbrooke Post Office, &c. do.....	400 00	21 50	327 50	560 25	50 00	1,359 25	
Sorel do.....	400 00	85 01	338 50	205 50	250 00	1,279 01	
St. Johns do.....	350 00	3 23	188 00	22 24	80 00	643 47	
St. Vincent de Paul Peni- tentiary.....	46 00		2,013 22	28 20		2,087 42	
Three Rivers Custom House.....	816 66		397 10		72 76	1,286 52	
Three Rivers Post Office..	400 00	15 49	223 62	218 50	60 00	917 61	
<i>Ontario.</i>							
Amherstburg Post Office, &c.....	366 67	32 60	279 25	44 40		722 92	
Barrie Post Office, &c.....	400 00	38 30	316 38	208 20	50 00	1,012 88	
Belleville do.....	600 00	26 35	391 75	518 36	21 75	1,558 21	
Berlin do.....	400 00	9 14	226 62	163 75	5 00	804 51	
Brantford do.....	600 00	7 79	290 14	319 40		1,217 33	
Brockville do.....	400 00	29 56	276 00	597 50	170 00	1,473 06	
Chatham do.....	850 00	8 50	247 65	257 99		1,364 14	
Clifton do.....	400 00	16 95	292 00	38 48	23 76	771 19	
Cobourg Inland Revenue.. do Post Office.....	15 66					15 00	
	150 00			101 05		251 05	
Cornwall do.....	365 00	13 65	273 20	418 83	45 00	1,115 68	
Dundas do.....			33 00	49 48		82 48	
Galt Post Office.....	400 00	4 00	223 33	171 60	12 00	810 93	
Gananoque Custom House do Post Office.....			150 00			150 00	
	16 66		42 00			58 66	
Guelph do.....	400 00	16 75	88 93	305 60	37 44	848 72	
Hamilton Custom House.. do Drill Shed.....	591 67	12 53	98 75	119 98		822 93	
do Post Office.....	108 00	12 25	92 50			212 75	
Kingston Canal Tolls Office do Custom House.....	790 03		994 00	1,590 24	3,377 36	6,751 63	
					12 00	12 00	
			297 00	116 40	80 80	494 20	
Carried forward....	30,219 30	792 60	25,985 74	21,351 11	9,797 08	88,145 83	

APPENDIX No. 1—*Continued.*

Name of Work.				Con- struction.	Repairs.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS— <i>Continued.</i>				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....				1,072,312 55	215,352 06	137,102 70	1,424,767 31
EXPENDITURE ON ACCOUNT SERVICES MENTIONED— <i>Con.</i>	Salaries of Engineers, &c.	Supplies for En- gineers, &c.	Heating.	Lighting.	Water.	Total.	
<i>Ontario—Concluded.</i>	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
Brought forward...	30,219 30	792 60	25,985 74	21,351 11	9,797 08	88,145 83	
Kingston Exa. Warehouse					3 00	3 00	
do Inland Revenue Office.....				60 80	31 21	92 01	
do Military College.	1,440 00					1,440 00	
do Penitentiary.....	1,100 00					1,100 00	
do Post Office.....		1 80	90 00	343 60	52 70	488 10	
London Custom House.	900 00	35 00	1,121 56	190 85	78 80	2,326 21	
do Post Office.....	600 00	5 25	582 51	530 75	36 00	1,754 51	
Orangeville Post Office.....	400 00	10 71	163 45	121 38		695 54	
Ottawa Experimental F'n.			191 60			191 60	
do National Art Gal'y		3 25				3 25	
do Printing Bureau.....				2 70		2 70	
Peterboro' Post Office.....	400 00		153 68	163 10	98 75	815 53	
Port Colborne Post Office.	190 00	56 22	148 70	28 39		423 31	
Port Hope do.....	400 00	15 93	197 00	211 50		824 43	
Stratford Post Office, &c..	600 00	12 55	302 85	313 20	63 00	1,291 60	
St. Catharines do.....	400 00	18 14	325 98	161 45	51 00	956 57	
St. Thomas do.....	400 00	26 89	364 00	412 49	38 82	1,242 20	
Toronto Custom House.....			573 23	130 11	261 03	964 37	
do Examining Ware- house.....	3,956 28	22 98	945 28	30 63	70 00	5,025 17	
do Inland Revenue Office.....	646 50		348 36	245 63	148 75	1,389 24	
do Post Office.....	1,878 50		722 71	2,302 81	634 10	5,538 12	
Windsor Post Office, &c..	1,000 00	12 85	491 25	618 63	145 36	2,268 09	
<i>Manitoba.</i>							
Winnipeg Custom House.			870 50	191 10	45 60	1,107 20	
do Dominion Lands Office.....			656 40	18 00		674 40	
do Examining Warehouse.....			408 00	4 20		412 20	
do Immigrant Shed.....			224 40			224 40	
do Post Office.....	2,749 75	151 24	2,366 25	828 30	571 60	6,667 14	
<i>North-West Territories.</i>							
Calgary Clerk of Works' Office.....			40 00			40 00	
do Mine Office.....			96 00			96 00	
McLeod Custom House.....			151 75			151 75	
Prince Albert Court House &c.....	400 00	8 25	183 08	10 60		601 93	
Regina Court House.....			538 60	23 32	19 00	580 92	
Carried forward....	47,680 33	1,173 66	38,242 88	28,294 65	12,145 80	127,537 32	

APPENDIX No. 1—*Continued.*

Name of Work.				Con- struction.	Repairs.	Staff and Main- tenance.	Total.
PUBLIC BUILDINGS— <i>Concluded.</i>				\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....				1,072,312 55	215,352 06	137,102 70	1,424,767 31
EXPENDITURE ON ACCOUNT SERVICES MENTIONED— <i>Con.</i>	Salaries of Engineers &c.	Supplies for En- gineers, &c.	Heating.	Lighting.	Water.	Total.	
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	
<i>N.-W. Territories—Con.</i>							
Brought forward.....	47,180 33	1,173 66	38,242 58	28,294 65	12,145 80	127,537 32	
Regina Jail and Lunatic Asylum.....			88 40			88 40	
do Post Office.....			355 45			355 45	
<i>British Columbia.</i>							
Nanaimo Post Office.....	600 00			149 65	33 00	782 65	
New Westminster Post Office.....	600 00		155 82	122 15		877 97	
Victoria Custom House.....			137 50			137 50	
do Post Office.....			230 25	887 30	42 00	1,159 55	
DOMINION BUILDINGS GENERALLY.....			1,840 61			1,840 61	
Totals.....	48,880 33	1,173 66	41,050 91	29,453 75	12,220 80	132,779 45	132,779 45
				1,072,312 55	215,352 06	269,882 15	1,557,546 76
HARBOURS AND RIVERS.							
<i>Nova Scotia.</i>							
Arisaig.....				149 37			149 37
Barrington Passage Pier.....				2,990 80			2,990 80
Bayfield Wharf.....				2,441 82			2,441 82
Bayfield.....					2,973 50		2,973 50
Bay St. Lawrence.....				1,997 09			1,997 09
Beaver River.....				1,499 56			1,499 56
Betty Island.....					499 81		499 81
Big Bras d'Or Wharf.....				2,076 53			2,076 53
Big Pond.....				1,998 33			1,998 33
Blue Rock.....				3,816 50			3,816 50
Birchtown Brook.....					200 00		200 00
Broad Cove.....				6,320 00			6,320 00
Brulé.....					549 44		549 44
Cheticamp.....				2,043 79			2,043 79
Comeauville.....				4 00			4 00
Cow Bay.....				9,906 38			9,906 38
Delap's Cove.....				999 97			999 97
Digby.....				4,498 14			4,498 14
East River of Pictou.....				700 00			700 00
East Bay.....					399 58		399 58
Eatonville.....				4,877 02			4,877 02
Economy Breakwater.....				301 79			301 79
Gabarus—Belfry Lakes Channel.....				800 00			800 00
Green Cove.....					497 33		497 33
Carried forward.....				1,119,733 64	220,471 72	269,882 15	1,610,087 51

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	1,119,933 64	220,471 72	269,882 15	1,610,087 51
HARBOURS AND RIVERS—<i>Con.</i>				
<i>Nova Scotia—Concluded.</i>				
Green Harbour.....		99 75		99 75
Hampton.....	750 00			750 00
Harbourville.....		100 00		100 00
Jones' Harbour.....		50 00		50 00
Kingsport.....		250 00		250 00
Lismore.....	1,000 00			1,000 00
Little Narrows.....	1,425 00			1,425 00
Lower Horton.....	2,252 28			2,252 28
Mabou Harbour.....	1,000 00			1,000 00
Main-à-Dieu.....		484 39	118 50	602 89
Margaretville.....		370 17		370 17
Meteghan.....	308 75			308 75
McNair's Cove.....		6,865 00		6,865 00
Noël.....	2,998 66			2,998 66
Parker's Cove.....	199 90			199 90
Parrsboro'.....		369 80		369 80
Partridge Island River.....	2,999 86	27 52		3,027 38
Pictou Island.....	1,632 33			1,632 33
Port Greville.....	399 98			399 98
Port Hood.....	3,300 00			3,300 00
Port Lorne.....	200 00			200 00
Roseway Beach.....		100 00		100 00
Round Bay.....		100 00		100 00
Sandford.....		200 00		200 00
Saulniersville.....	1,859 59			1,859 59
Sheet Harbour.....	1,700 46			1,700 46
Spencer's Island Wharf.....	3,111 60			3,111 60
Tatamagouche, Wharf on East Side.....	598 94			598 94
Trout Cove.....		399 79		399 79
Wallace Harbour.....	999 38			999 38
Western Head.....	4,481 95			4,481 95
White Point.....	2,499 46			2,499 46
<i>Prince Edward Island.</i>				
Annandale.....		365 00		365 00
Belfast Pier.....		1,853 79		1,853 79
Campbell's Cove.....		294 24		294 24
Cascumpec.....	3,330 74			3,330 74
Georgetown.....		198 11		198 11
Hickey's Pier.....		539 99		539 99
Lewis Point.....		500 00		500 00
Malpeque.....		871 23		871 23
Murray Harbour.....		51 30		51 30
North Cardigan.....		350 00		350 00
North Rustico.....		248 22		248 22
Pinette.....		99 56		99 56
Pownal.....		439 98		439 98
Souris, Knight's Point.....	4,998 87			4,998 87
South Rustico.....		150 00		150 00
Sturgeon Pier.....		250 00		250 00
Tignish.....		534 22		534 22
Vernon River Pier.....	97 51			97 51
Carried forward.....	1,161,878 90	236,633 78	270,000 65	1,668,513 33

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward	1,161,878 90	236,633 78	270,000 65	1,668,513 33
HARBOURS AND RIVERS.—<i>Con.</i>				
<i>New Brunswick.</i>				
Belliveau Village.....	2,554 70			2,554 70
Campbellton Ballast Wharf.....	132 50			132 50
Cape Tormentine.....	24,042 07			24,042 07
Edgett's Landing.....	188 37			188 37
Grande Anse.....	3,090 37			3,090 37
Hopewell Cape.....		499 86		499 86
Maisonette.....	528 29			528 29
Pointe du Chêne.....	999 46			999 46
Quaco.....		15 00		15 00
Richibucto.....	2,999 54			2,999 54
River Kennebecasis.....	1,896 98			1,896 98
Rocher Bay, Anderson's Hollow.....	1,583 50			1,583 50
Salmon River.....		198 30		198 30
Shippegan.....		700 00		700 00
St. John Harbour (Fort Dufferin, retaining wall at Negro Point).....		3,005 00		3,005 00
St. John Harbour (Partridge Island).....	1,492 00			1,492 00
St. John River.....	5,355 60			5,355 60
do between Fredericton and Woodstock.....	999 58			999 58
do Dredging Oromocto Shoal.....	2,000 00			2,000 00
St. Louis.....	1,897 65			1,897 65
Harbours Generally, Maritime Provinces.....			12,098 26	12,098 26
<i>Quebec.</i>				
Anse à l'Eau or Tadoussac Pier.....	1,282 06			1,282 06
Anse St. Jean.....		239 50		239 50
Baie St. Paul.....	4,867 92			4,867 92
Barachois de Malbaie.....	327 00			327 00
Belœil Piers and Booms.....			151 00	151 00
Beauport.....	677 32			677 32
Berthier (en bas).....		1,450 97		1,450 97
Cap à L'Aigle.....		548 81		548 81
Cap Santé.....	252 43			252 43
Carleton Pier.....		28 98		28 98
Cedars Pier.....		48 00		48 00
Chenal du Moine—Ice Piers at Ste Anne de Sorel.....	2,708 28			2,708 28
Chicoutimi.....	1,631 65			1,631 65
Coteau du Lac.....	1,968 34	1,925 07		3,893 41
Coteau Landing Pier.....		1,413 00		1,413 00
Etang du Nord, Magdalen Islands.....	3,753 24			3,753 24
Georgeville.....	661 43			661 43
Grand Pabos.....	750 00			750 00
Harbours and Rivers Generally.....			6,113 08	6,113 08
Isle Perrot.....	3,640 31			3,640 31
Isle Verte.....	3,999 39			3,999 39
Kamouraska.....	220 00			220 00
Lake Megantic.....		873 02		873 02
Lake St. John, Grande Décharge.....	2,112 11			2,112 11
Laprairie, Works in connection with Ice Piers.....	5,027 67			5,027 67
Les Eboulements.....		1,557 06		1,557 06
Lévis Graving Dock.....			4,965 67	4,965 67
Longueuil Wharf.....	762 89	1,517 77		2,280 66
Long Sault Pier.....	2,504 88			2,504 88
Murray Bay do.....		2,451 15		2,451 15
Carried forward.....	1,248,786 43	253,105 27	293,328 66	1,795,220 36

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	1,248,786 43	253,105 27	293,328 66	1,795,220 36
HARBOURS AND RIVERS—Continued.				
<i>Quebec—Concluded.</i>				
New Carlisle	1,966 69			1,966 69
Newport River, Mouth of.....	1,672 06			1,672 06
Papineauville or Pentecost Bay Channel.....	3,274 56			3,274 56
Percé Pier	7,787 12			7,787 12
Piers below Quebec		11,683 65		11,683 65
Pointe au Persil.....		498 40		498 40
Port Daniel	2,715 71			2,715 71
Quebec Harbour		119 95		119 95
Quebec Immigration Building, Crib Work on Break- water	2,467 00			2,467 00
Rivière Cap de Chatte	2,500 43			2,500 43
do du Lièvre	64,506 74			64,506 74
do du Loup (en bas) Wharf		392 46		392 46
do Madawaska	400 00			400 00
do Mechinac	499 65			499 65
do Nicolet, Harbour of Refuge	10,999 93			10,999 93
do Ouelle Pier		342 82		342 82
do Ste Anne de la Pérade	2,375 00			2,375 00
River St. Francis	4,059 44			4,059 44
do St. Lawrence, Breaking Ice between Sorel and Three Rivers.....			2,944 42	2,944 42
do St. Lawrence		30 00		30 00
do do Water Levels.....		1,943 56		1,943 56
do Yamachiche	825 40			825 40
do Yamaska, Stone Protection to Dam, &c.....	2,493 20	199 87	801 75	3,494 82
St. Alphonse, Bagotville	1,024 54			1,024 54
Ste Anne de Beaupré		25 00		25 00
Ste Anne du Saguenay.....	2,109 69			2,109 69
St. Irénée Wharf	2,890 47			2,890 47
St. Laurent (Isle d'Orléans) Pier		369 28		369 28
St. Thomas de Montmagny do		14 00		14 00
Sorel Ice Piers.....	2,573 32			2,573 32
Three Rivers Harbour		7 40		7 40
do Pier	3,999 83			3,999 83
Trois Pistoles Pier.....	2,120 58			2,120 58
<i>Ontario.</i>				
Belleville Harbour	2,576 78			2,576 78
Burlington Channel		115 22	702 04	817 26
Cobourg	9,871 53			9,871 53
Collingwood	7,281 55			7,281 55
Goderich	3,511 46			3,511 46
Harbours and Rivers generally.....			8,725 73	8,725 73
Hilton, or Marksdale	162 00			162 00
Kaministiquia River.....	32,403 65			32,403 65
Kincardine	5,049 50			5,049 50
Kingston Harbour	6,851 84			6,851 84
do Graving Dock	33,763 87			33,763 87
Kingsville, Lake Erie	5,188 72			5,188 72
Little Current, Lake Huron	222 80			222 80
Little Nation River.....	4,509 06			4,509 06
Meaford Harbour	7,775 00			7,775 00
McGregor's Creek	7,809 76			7,809 76
do Harbour.....	2,000 00			2,000 00
Narrows between Lakes Simcoe and Couchiching.....	500 00			500 00
Oakville Harbour	2,783 81			2,783 81
Carried forward.....	1,504,309 12	268,846 88	306,502 60	2,079,658 60

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
HARBOURS AND RIVERS—Concluded.				
Brought forward.....	1,504,309 12	268,846 88	306,502 60	2,079,658 60
<i>Ontario—Concluded.</i>				
Ottawa River Revetment Wall.....	18 70			18 70
Owen Sound.....	18,418 20			18,418 20
Penetanguishene.....	15,014 48			15,014 48
Port Albert.....	939 25			939 25
do Arthur Harbour.....	101,763 94			101,763 94
do Elgin.....	2,450 13			2,450 13
do Hope.....	2,492 31			2,492 31
Portsmouth.....	5,933 74			5,933 74
Rideau River, Dredging North Branch.....	3,886 54			3,886 54
Rivière aux Pêches.....	300 00			300 00
do Pucos.....	2,003 59			2,003 59
River Ottawa, Narrows above Pembroke.....	3,298 40			3,298 40
Rondeau.....	1,997 59			1,997 59
Sault Ste. Marie.....	12,019 26			12,019 26
Sheguiandah, Grand Manitoulin Islands.....	24 90			24 90
Southampton.....	1,852 50			1,852 50
Summerstown.....	1,118 27			1,118 27
Thornbury, Dredging.....	2,818 13			2,818 13
Tolsma Bay, Cockburn Island.....	7,756 40			7,756 40
Toronto Harbour.....	30,233 78			30,233 78
<i>Manitoba.</i>				
Harbours and Rivers generally.....			2,456 80	2,456 80
<i>British Columbia.</i>				
Chemamus.....		198 00		198 00
Columbia River.....	4,919 54			4,919 54
Coquitlam do.....	974 37			974 37
Cowichan do.....	999 56			999 56
Esquimalt Graving Dock.....	7,949 16		12,720 10	20,669 26
Fraser River.....	19,998 23			19,998 23
Harrison.....	693 94			693 94
Koksaliah.....	497 78			497 78
Nanaimo Harbour, Removal of Nicol rock.....	10,028 05			10,028 05
do Bigg's Portage.....	987 38			987 38
Nicomeckel River.....	504 75			504 75
River Somass.....	467 48			467 48
Serpentine River.....	997 50			997 50
Victoria Harbour.....	11,633 86			11,633 86
HARBOURS AND RIVERS GENERALLY.				
			10,750 38	10,750 38
DREDGES.....	38,791 75	46,214 33		85,006 08
DREDGING.				
<i>Nova Scotia.</i>				
Arisaig.....	\$1,378 79			
Barrington.....	3,889 60			
Bayfield.....	2,619 69			
Granton.....	1,143 90			
Little Glace Bay.....	4,735 27			
McNair's Cove.....	2,642 67			
Pictou.....	1,198 38			
Yarmouth.....	6,653 87			
Generally.....	767 22			
	\$25,029 39			
Carried forward.....	\$25,029 39	1,818,092 58	315,259 21	332,429 88
				2,465,781 67

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APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	\$25,029 39	1,818,092 58	315,259 21	332,429 88
				2,465,781 67
DREDGING—Continued.				
<i>Prince Edward Island.</i>				
Connolly's Wharf.....	\$1,122 17			
Peake Bros. & Co.'s Wharf...	1,124 69			
P. E. I. Railway do ...	242 59			
Red Point do ...	991 12			
Steam Navigation Co. do ...	1,610 50			
Generally.....	4 23			
	\$5,095 30			
<i>New Brunswick.</i>				
Dalhousie.....	\$1,941 66			
Kennebecasis River.....	1,126 74			
Oromocto Shoal.....	2,944 77			
St. John Harbour, Anchor Line Wharf.....	456 14			
Traverse.....	3,439 47			
Generally.....	4 24			
	\$9,913 02			
Total Maritime Provinces.....	\$40,037 71			
<i>Quebec.</i>				
Chicoutimi.....	\$ 170 50			
Grande Rivière.....	586 12			
Lacolle.....	1,790 18			
L'assomption—Charlemagne..	748 10			
Ottawa Riv.—Pointe aux Ang.	1,311 51			
Papineauville.....	257 00			
Rivière du Loup (<i>en bas</i>).....	999 90			
do Richelieu.....	3,264 64			
do Ste. Anne de la Pêrade	80 00			
River St. Francis.....	146 50			
do St. Louis.....	657 92			
St. Placide.....	1,175 38			
Generally.....	2,421 78			
	\$13,609 53			
<i>Ontario.</i>				
Brighton.....	\$ 595 43			
Burlington Channel.....	4,842 40			
Cobourg.....	1,207 41			
Goderich.....	261 05			
Kemptville.....	51 81			
Kincardine.....	928 51			
Kingston Harbour.....	580 00			
Newcastle.....	195 97			
Port Hope.....	3,469 53			
Riv. St. Clair, Point Edward..	5,214 10			
Saugeen.....	650 48			
Generally.....	2,836 70			
	20,833 39			
Carried forward.....	\$74,480 63	1,818,092 58	315,259 21	332,429 88
				2,465,781 67

APPENDIX No. 1—Continued.

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward. \$74,480 63	1,818,092 58	315,259 21	332,429 88	2,465,781 67
DREDGING—Concluded.				
Manitoba.				
Red River. \$12,067 05				
White Mud River. 3,495 38				
Generally 2,218 96				
	17,781 39			
British Columbia.				
Fraser River. \$4,253 14				
Esquimalt Graving Dock. 622 06				
New Westminster. 902 99				
Victoria Harbour. 8,369 43				
	14,147 62			
DREDGING—GENERAL SERVICE.	106,409 64		5,463 47	106,409 64 5,463 47
SLIDES AND BOOMS.				
Saguenay District Slides.		2,379 65	1,662 55	4,042 20
St. Maurice do	3,436 64	5,517 33	21,290 72	30,244 69
Ottawa do			28,644 89	28,644 89
Ottawa River Slides.	2,292 15	7,292 62		9,584 77
do Rapide des Quinze.	2,000 00			2,000 00
Gatineau do		843 18		843 18
Madawaska do	1,503 42	4,355 53		5,858 95
Coulonge do	795 77	1,076 01		1,871 78
Black do	643 83	2,472 95		3,116 78
Petewawa do		3,837 04		3,837 04
Newcastle District Works.		5,143 89	2,090 00	7,233 89
St. Maurice, Grand'Mère Sorting Booms.	9,000 00			9,000 00
Dumoine River Works.		1,122 98		1,122 98
Generally.			977 92	977 92
ROADS AND BRIDGES.				
Des Joachims Bridge.	125 00			125 00
Portage du Fort Bridge.	5,394 12			5,394 12
Ottawa, Cartier Square.		232 01		232 01
do Chaudière Slide Bridge.		4,219 59		4,219 59
do Maria Street Bridge.		176 87		176 87
do McLaren's Bridge, Rideau River.	2,000 00			2,000 00
do New Iron Truss Bridge.	13,090 37			13,090 37
do Sapper's Bridge.		146 54		146 54
do St. Patrick Street.		22 99		22 99
do Union Suspension Bridge.		1,161 37		1,161 37
do Wellington Street.	4,951 58	7,289 55		12,241 13
Battleford Bridge, N.W.T.	1,485 77			1,485 77
Belly River Bridge, Lethbridge, N.W.T.	239 37			239 37
Bow do N.W.T.	18 40			18 40
Calgary Bridge, N.W.T.	39 10			39 10
Carried forward.	1,971,517 74	362,549 31	392,559 43	2,726,626 48

APPENDIX No. 1—*Continued.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	1,971,517 74	367,549 31	392,559 43	2,726,626 48
TELEGRAPH LINES.				
<i>Nova Scotia.</i>				
Cape Sable.....			368 16	368 16
Cheticamp.....\$ 497 49			778 22	778 22
Digby.....1,752 00				
Meat Cove.....4,663 24			1,951 98	1,951 98
	6,912 73			6,912 73
<i>Prince Edward Island.</i>				
Between Island and Mainland (subsidy).....			1,946 66	1,946 66
<i>New Brunswick.</i>				
Bay of Fundy.....\$1,073 47				
Escuminac.....242 59				
	\$ 1,316 06			
<i>Newfoundland.</i>				
Anglo-American Co., subsidy Cape Ray line.....250 00				
<i>Quebec.</i>				
North Shore St. Lawrence, Quebec to Grosse Ile.....\$7,178 33				
North Shore St. Lawrence, towards Point aux Esqui- maux.....7,940 53	7,518 57			7,518 57
Magdalen Island.....4,912 81	349 89			349 89
Anticosti.....4,166 86				
	24,198 53			
LOWER ST. LAWRENCE AND MARITIME PROVINCES GENERALLY.....9,686 77			35,451 36	35,451 36
<i>Ontario.</i>				
Bath and Amherst Island.....			50 66	50 66
Pelé Island.....\$ 6,908 17			61 55	61 55
Wolfe do.....2,051 70				
	8,959 87			8,959 87
<i>North-West Territories.</i>				
Battleford to Edmonton via Saddle Lake Station.....\$ 691 64				
Clarke's Crossing to Prince Albert.....6,005 57				
Humbolt to Qu'Appelle.....5,759 09				
Banff telephone line.....668 10				
	13,124 40			13,124 40
Wood Mountain.....			84 00	84 00
Generally.....			25,053 41	25,053 41
<i>British Columbia.</i>				
Bonilla Point line.....	4,360 16			4,360 16
Cariboo line.....			6,441 23	6,441 23
TELEGRAPH SERVICE GENERALLY.....			8,914 26	8,914 26
Carried forward.....	2,012,743 36	362,549 31	473,660 92	2,848,953 59

APPENDIX No. 1—*Concluded.*

Name of Work.	Con- struction.	Repairs.	Staff and Main- tenance.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Brought forward.....	2,012,743 36	362,549 31	473,660 92	2,848,953 59
MISCELLANEOUS.				
Surveys and Inspections and Plans of Government Properties.....			30,279 31	30,279 31
Arbitrations and Awards.....			4,000 00	4,000 00
Miss Margaret Smellie, Gratuity equal to 1 month's pay of her late father.....			55 00	55 00
Agent and Contingencies, British Columbia.....			5,599 33	5,599 33
Unforeseen Expenses.....			76 15	76 15
Totals.....	2,012,743 36	362,549 31	513,670 71	2,888,963 38
WORKS AUTHORIZED BY SPECIAL ACTS OF PARLIAMENT.				
St. Lawrence River—Deepening between Quebec and Montreal.....	243,334 28			243,334 28
Quebec Harbor Improvements.....	385,000 00			385,000 00
Totals.....	628,334 28			628,334 28
Grand Totals.....	2,641,077 64	362,549 31	513,670 71	3,517,297 66

O. DIONNE,
Accountant.

PUBLIC WORKS DEPARTMENT,
OTTAWA, 4th December, 1889.

APPENDIX No. 2.

R E P O R T

ON

P U B L I C B U I L D I N G S

THROUGHOUT THE DOMINION,

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889.

BY

THOMAS FULLER. CHIEF ARCHITECT.

APPENDIX No. 2.

REPORT OF THE CHIEF ARCHITECT.

Ref. No. 103,357.

CHIEF ARCHITECT'S OFFICE,
OTTAWA, 9th November, 1889.

SIR,—I have the honour to transmit herewith the annual report on public buildings and works under my charge, for the fiscal year ended 30th June, 1889.

I have the honour to be, Sir,

Your obedient servant,

THOMAS FULLER,
*Chief Architect.*A GOBEIL, Esq.,
Secretary Department Public Works,
Ottawa.

PROVINCE OF PRINCE EDWARD ISLAND.

CHARLOTTETOWN.

DOMINION BUILDING.

A new time lock was placed on the door of the safe of the Receiver General's Department and sundry minor repairs executed, under the supervision of Mr. W. E. Harris, architect.

MONTAGUE.

POST OFFICE

Additional grading was done and the building occupied.

Plans, &c., prepared by this Department.

Superintending architects, Messrs. Stirling & Harris.

Contractor, Mr. L. A. Wilmot.

PROVINCE OF NOVA SCOTIA.

AMHERST.

PUBLIC BUILDING.

An asphalt sidewalk, with stone curb, was laid the entire length of both street fronts, excepting opposite the gateways, where block pavement was put down. Owing to alteration of street grade necessary additional granite entrance steps were put in, and the original steps taken down and rebuilt; a cement floor was laid in the boiler room, the outside walls pointed, and outside woodwork and galvanized iron painted, and repairs were made to drains, roof, gates, gateways. All the windows were furnished with storm sashes. The building has been fitted with incandescent electric lamps.

Clerk of Works, Mr. John E. Turnbull.

ANNAPOLIS.

POST OFFICE, &C., BUILDING.

On 20th March, 1889, a site was obtained on the corner of St. George and Railway streets, and on 7th June, 1889, a contract for the construction of the building was entered into. The building will be two and a-half stories, of brick, on a stone foundation, 58 feet by 35 feet, with a one-story brick annex for an Examining Warehouse, 13 feet by 31 feet. The ground floor is to be for the Post Office and the first floor for the Customs and Inland Revenue Departments, each department being furnished with a brick vault; and the attic is to be occupied by the caretaker.

Plans, &c., prepared and work superintended by this Department.

Clerk of Works, Mr. Charles Jacques.

Contractors, Messrs. Rhodes, Curry & Co., of Amherst, N.S.

ANTIGONISH.

PUBLIC BUILDING.

The hot water heating apparatus has been put in, a portion of the basement has been finished and fitted up as a bonded warehouse, the floor of the public lobby of the post office renewed, a new stairway to the cellar constructed and sundry minor works executed.

Clerk of Works, John E. Campbell.

HALIFAX.

DOMINION BUILDING.

The roof has been repaired, and a new flag-staff, iron ladder and iron railing erected, and parcel chute from the post office to the basement constructed.

EXAMINING WAREHOUSE.

The parcel office was enlarged and the counters and shelving therein extended; several of the offices were cleaned and painted.

Clerk of Works, Mr. John E. Turnbull.

NAPPAN.

EXPERIMENTAL FARM BUILDINGS.

On 15th August, 1888, a contract was entered into for the construction of the following buildings, which are now in progress:—

Superintendent's Residence.—A wooden two story building, with a stone basement; the main building 42 feet by 34 feet, and a kitchen wing 24 feet by 24 feet; to have on the ground floor a hall and staircase, a parlor, a library, a dining room, an office, a kitchen, two pantries, a wash-room, back stairs, &c., and on the first floor nine bedrooms, a bath room, a closet, &c.

Workmen's Cottage.—A one and one-half story, wooden cottage, 27 feet by 21 feet, on a stone basement, with a summer kitchen in the rear 10 feet by 14 feet. The ground floor will consist of a parlor, kitchen and store room, and the first floor of three bedrooms and a store room.

Barn and Stabling.—These are to be of wood, and to consist of a main building 111 feet by 50 feet, 40 feet in height, on a stone basement 12 feet in height, and a wing 65 feet by 32 feet and 32 feet in height.

The basement is arranged to accommodate horned cattle and horses; the ground floor is a driving floor, and for hay and grain storage.

Plans prepared and work carried on under the supervision of this Department.

Clerk of Works, Lt.-Col. Wm. Blair.

Contractors, Messrs. Rhodes, Curry & Co.

NEW GLASGOW.

PUBLIC BUILDING.

The water service of the building has been connected with that of the Water-works Company; a new urinal and wash basin have been put in, and the ground and

first floor windows have been furnished with storm sash, and some general repairs have been made.

Clerk of Works, Mr. John E. Turnbull.

SYDNEY.

POST OFFICE, &C., BUILDING.

A contract for the construction of this building, on the corner of Charlotte and Dorchester streets, was entered into 12th December, 1888, and construction is now in progress. It consists of a main three story brick building, on a stone foundation, 57 feet by 44 feet, with a clock tower on the street corner, and a one story annex, 45 feet by 23 feet in the rear. The ground floor of main building is to be occupied by the Post Office, the first floor by the Customs, Inland Revenue and Marine offices, and the attic is for the apartments of the caretaker; the Examining Warehouse and the Weights and Measures offices will be in the annex.

Plans, &c., prepared and work supervised by this Department.

Clerk of Works, Mr. T. E. Burchell, Sydney.

Contractors, Messrs. Cowan & Donald, Moncton.

WINDSOR.

POST OFFICE BUILDING.

Storm sashes and storm doors were supplied throughout and repairs made to furnace, plumbing and fittings.

Clerk of Works, Mr. John E. Turnbull.

YARMOUTH.

PUBLIC BUILDING.

Additions were made to the heating surface, additional furniture supplied, and alterations made in Money Order Office.

PROVINCE OF NEW BRUNSWICK.

BATHURST.

PUBLIC BUILDING.

The exterior faces of walls were repointed and the heating apparatus was extended, the Custom House floor taken up and re-laid, and repairs were made to roofing, and some painting, &c.

Clerk of Works, Mr. John E. Turnbull.

CARLETON.

POST OFFICE.

Repairs were made to the slating and flashing of the roof, the clock turret windows, the water pipes and the door springs.

Works carried out under the supervision of Mr. W. J. McCordock.

CHATHAM.

POST OFFICE.

This building is in a dilapidated state, and requires extensive repairs. In the meantime, the outer walls have been supported and cracks filled, and cement covering repaired, and Post Office floor was strengthened and fireplaces made safe.

Clerk of Works, Mr. John E. Turnbull.

DALHOUSIE.

POST OFFICE.

This building, which was described in my report of last year, is still in progress.

Plans, &c., prepared and work carried out under the supervision of this Department.

Clerk of Works, Mr. J. C. Barberie.

DORCHESTER.

MARITIME PENITENTIARY.

Some articles of furniture, &c., were furnished to the Deputy Warden's residence.

FREDERICTON.

The attic rooms were partitioned and plastered to provide a residence for the caretaker, additions made to plumbing and gas fitting, and a small hoisting apparatus and elevator supplied.

Clerk of Works, Mr. F. S. Hilyard.

MONCTON.

POST OFFICE.

Owing to the action of the water on the iron pipes they were found to be nearly filled; it was deemed advisable to replace them with lead. Some requisite changes of the drains were made and the entrance gates to the yard were repaired and re-hung, and walls were pointed where necessary.

Clerk of Works, Mr. John E. Turnbull.

NEWCASTLE.

PUBLIC BUILDING.

It was necessary to make some slight changes and to extend the heating apparatus, and sundry repairs, &c., were made.

Clerk of Works, Mr. John E. Turnbull.

ST. JOHN.

CUSTOM HOUSE.

The covering of the north-east and north-west roofs was removed and replaced with asphalt, and while doing this all the old zinc bases of the cresting were removed and new galvanized iron substituted. The fire brick lining of the boiler setting was renewed.

The hydraulic hoist has been provided with new and heavier shafting, valves, &c.

In the centre of the building, those portions not previously cleaned were cleaned and coloured, also the ceilings and cornices of the south wing, and the walls repaired, sized and painted three coats, the hardwood shellacked and varnished, and remaining wood work re-painted grained, &c., and varnished.

The walls of six offices in the north wing, occupied by the Inland Revenue, were cleaned and painted. Repairs were made to bells, locks, flagstuffs, &c.

Works executed under the supervision of Mr. W. J. McCordock.

MARINE HOSPITAL.

Sundry repairs were made to the basement, ground and first floor rooms, wards and corridors, and wood work shellacked and varnished, and the walls painted three coats and the roof of the western porch covered and reflashed.

POST OFFICE.

The ceilings on the ground floor were cleaned and whitened and walls washed and the iron columns painted.

Repairs were done to ventilating shaft, closets, urinals, bells, locks, clocks, iron roof, cresting and flashing; the cresting and cornices were re-painted.

Work executed under the supervision of Mr. W. J. McCordock.

SAVINGS BANK.

The asphalt side walks were repaired, and the boiler casing was repaired and re-lined; coal vaults and iron girders under alley way cleaned, new floors laid, the iron work painted two coats, red lead, and the walls limewashed. The old roof covering was removed and replaced by asphalt.

Work executed under the supervision of Mr. W. J. McCordock.

ST. STEPHEN.

PUBLIC BUILDING.

Some door springs and other minor fittings were supplied.

WOODSTOCK.

POST OFFICE, CUSTOM HOUSE, &C.

Arrangements are being made to provide a clock to be placed in the turret originally designed for that purpose.

PROVINCE OF QUEBEC.

AYLMER.

POST OFFICE.

This building, which was described in my report of last year, was completed, and furnished with a hot water heating apparatus, and is now being fitted up for occupation.

Plans, specifications, &c., prepared and works carried out under the supervision of this Department.

Clerk of Works, Mr. Thomas Symmes, Aylmer.

Contractor for the building and fittings, Mr. D. B. McDonald, Aylmer.

Contractors for heating apparatus, Messrs. Butterworth, Ottawa.

CHICOUTIMI.

MARINE HOSPITAL.

Painting and general repairs were made in the hospital portion of the building.

COATICOOK.

PUBLIC BUILDING.

This building, which was described in my report of last year, is being carried on so as to warrant the execution and completion during the autumn of 1889; a heating apparatus has been put in, and fittings for Post Office.

Plans and specifications prepared and works superintended by this Department.

Clerk of Works, Mr. Wright Sleeper.

Contractor for buildings and fittings, Mr. F. F. Shurtleff.

Contractor for heating, Mr. W. Clendenning.

FRASERVILLE (RIVIÈRE DU LOUP).

POST OFFICE, &C., BUILDINGS.

On 26th March, 1889, Cadastral Lot 266, having a frontage of 100 feet on Iberville street and 75 feet on Champlain street, was purchased.

HULL.

POST OFFICE.

A stone boundary wall, with an iron railing, was constructed, and the grounds graded.

Contractor, Mr. Wm. Stuart, Ottawa.

JOLIETTE,

POST OFFICE, &c.

This building, which was described in my report of last year, has been carried on so as to warrant its execution and completion during the autumn of 1889.

Plans, &c., prepared and work carried out under the supervision of this Department.

Clerk of Works, Mr. A. Durand, Joliette.

Contractor, Mr. George Beaucage, Quebec.

LACHINE.

POST OFFICE, &c., BUILDINGS.

Cadastral lot No. 253 on St. Joseph street, the main street of the town, was acquired for a site, and plans, &c., for a Post Office building thereon, are being prepared by this Department.

MONTREAL.

ARMORIES.

The fittings for the various armories and furnishings for offices were supplied, and the places are now occupied.

Plans prepared and works supervised by Mr. A. Raza.

Clerk of Works, Mr. John Bowie.

Contractors, J. B. St. Louis & Brothers, Montreal.

CUSTOM HOUSE.

Extensive alterations to boilers and steam heating apparatus were made, the Record Office was enlarged, the entrance and staircase halls were re-laid with tiles, the special agent's office was renovated, and sundry minor repairs were made.

Superintending Architect, Mr. James Nelson.

EXAMINING WAREHOUSE.

Alterations in the Assistant Hardware Appraiser's office were made, and the necessary cleaning and painting done.

Superintending Architect, Mr. James Nelson, Montreal.

POST OFFICE.

A portion of the external surface of stone work was cleaned and pointed, a new letter slide in front of building constructed, new dials were supplied to the clock, new wire doors to the hoist, new sky-light with wire guards in roof, a new flag-staff, brass railing in Accountant's office, new sorting frame for letter-carriers, desks for Civil Service examinations, safe for Customs Post Office, and furniture for various offices, the public lobby and Money Order Offices were renovated, new water-closets and other plumbing put in, and repairs made to furniture, stamp vendor's office, roof, &c.

Superintending Architect, Mr. James Nelson.

Clerk of Works, Mr. Geo. Bowie.

QUEBEC.

CITADEL.

The usual repairs and cleaning were made of the quarters of His Excellency the Governor General, under the supervision of this Department.

CUSTOM HOUSE.

The brick setting of the hot-water furnace, being dilapidated, was taken down and re-built, the walls, ceilings, cornices and woodwork on first attic floor, with the exception of the attic passage, were cleaned and re-painted, under the supervision of this Department.

IMMIGRATION BUILDING.

A range was supplied, as also baths, outside settees on verandas and an enclosed hangard.

Superintending Architect, Mr. J. F. Peachy, Quebec.

MARINE HOSPITAL.

The plaster of the walls and ceilings, with exception of a few rooms on the ground floor, has been repaired, and in some cases renewed.

Superintending Architect, Mr. J. F. Peachy.

OBSERVATORY.

The residence of the Commandant has been generally repaired and renovated, varnishing of woodwork, papered and painted.

POST OFFICE.

The offices of the Post Office on the first floor were cleaned, painted, carpeted, fitted up, furnished and provided with electric bells; new electric clocks were supplied and fitted up in Post Office; a room on first floor was fitted up and furnished for Custom House; panels and fittings and furnishings of Post Office were repaired.

Superintending Architect, Mr. J. F. Peachy.

QUEEN'S WHARF BUILDING.

General repairs to woodwork, roofs, painting, &c., were made in connection with the Marine and Immigration Offices.

Superintending Architect, Mr. J. F. Peachy.

ST. HYACINTHE.

POST OFFICE, &C., BUILDING.

On 19th March, 1889, a site, consisting of Lot 525, and a portion of 524, on the corner of Girouard and St. Joseph streets, with frontages of 81 ft. 6 in., and 133 ft. 3 in., respectively, was acquired, and plans, &c., for the construction of a public building are in course of preparation.

ST. JÉRÔME.

PUBLIC BUILDING.

This building, which was described in my report of last year, has since been in constant progress; plans for the hot water apparatus are prepared and the building is expected to be complete for occupation during December, 1889.

Plans and specifications prepared and work supervised by this Department.

Clerk of Works, Mr. J. Matte.

Contractor, Mr. Joseph Fitzpatrick, Joliette.

Contractor for heating apparatus, Mr. E. Chanteloup, Montreal.

ST. VINCENT DE PAUL.

PENITENTIARY.

The following works were carried out under the supervision of this Department, by convict labor :—

Western Dormitory Wing.—The walls of this portion, which is 116 ft. by 42 ft. on plan, and is to contain 120 cells, were carried up continuously, and is expected to be roofed in and enclosed by October, 1889.

Keeper's Hall.—The register for the convicts, indicating the name and number of cell he occupies, was erected and enclosed with brass railing, to prevent being tampered with.

Warden's Quarters.—A lead tank and a fountain have been placed in the Warden's grounds.

Deputy Warden's Quarters.—A system of electric bells connected with those of the prison was put in.

Episcopal Chaplain's Residence.—A water supply connection was made with main tank, a 6-inch main pipe was laid, a sink and hopper closet fitted up.

Baker's Shop.—Steam radiators were put in and connected with the boiler and main boiler house.

Main Building.—The entrance lobby floor was laid with encaustic tiles and the office connected with the Warden and Deputy Warden's quarters by electric bells, and three wash basins fitted up.

Piggery.—The old piggery being dilapidated, a new wooden building, covered with Canada plate, the main portion being 190 ft. by 30 ft.; and an annex for feed boilers, &c., was erected about a half mile from the Penitentiary, and enclosed with a strong wooden fence.

Work Shops.—The engine in the carpenter and joiner shop being old and unsuitable, was replaced by a new 45 horse-power engine, with the necessary belting, shafting, &c.

Water Works.—The rose of the iron suction pipe in the river was disturbed by ice, and had to be repaired and replaced. To prevent a re-occurrence of this, a pier 30 by 20 feet is being built over the pipe. In addition to the works mentioned, various minor repairs, alterations, &c., were made to the buildings, &c., in connection with this institution.

Plans prepared and work supervised by Mr. John Bowes, Architect.

SHERBROOKE.

PUBLIC BUILDING.

Repairs were made to the plastering, plumbing and water closet; a hardwood floor was laid in the Customs Office, whitewashing and tinting were done to the walls and ceilings, the outside woodwork was painted and an asphalt pavement laid along the street line.

SOREL.

PUBLIC BUILDING.

Repairs to roof, tower, doors, &c., were made.

THREE RIVERS.

CUSTOM HOUSE.

Additional heating surface was put in two of the ground floor offices; an outbuilding for blinds, storm sash, &c., was constructed, and some painting and papering were done to several of the offices.

Superintending Architect, Mr. O. Z. Hamel, Three Rivers.

POST OFFICE.

An extension of the outbuilding was made, a new drain put in, some articles of furniture supplied the Post Office Inspector's office, and some minor repairs executed.

Superintending Architect, Mr. O. Z. Hamel.

PROVINCE OF ONTARIO.

ALMONTE.

POST OFFICE, &c., BUILDINGS.

A site having been obtained at the junction of Mill and Little Bridge streets, a contract for the construction of the building was entered into, 11th June, 1889.

The building is to have a main portion $2\frac{1}{2}$ stories and basement 51 feet by 31 feet, and a one story annex, 27 feet by 18 feet. The walls are to be brick with stone dressings and on stone foundations; the floors, partitions and roof of wood; the roof covering of galvanized iron.

Plans, &c., prepared and work supervised by this Department.
Clerk of Works, Mr. Andrew Bell, Almonte.
Contractor, Mr. Robert Cameron, Almonte.

AMHERSTBURG.

The storm sashes were painted.

BARRIE.

POST OFFICE, &C.

A newspaper sorting frame and several minor fittings were provided for the Post Office, and the building was furnished with incandescent electric light.
Superintending Architects, Messrs. Kennedy, Gaviller & Holland, Barrie.

BELLEVILLE.

POST OFFICE.

The walls and ceilings of the offices were distempered, the woodwork painted, an electric arc light for the front of the building was placed in position, and a postal bag rack and some articles of furniture supplied.

BRAMPTON.

POST OFFICE, &C., BUILDING.

A contract for the construction of this building was entered into on 23rd October, 1888, and the works are now in progress.

It will consist of a brick three story main portion, 47 ft. by 42 ft., on a stone foundation, with a one story brick building, 40 ft. by 18 ft. in the rear, and connected with the main building. The basement of the main building is to contain fuel and furnace rooms, the ground floor the Post Office, the first floor the Customs and Inland Revenue Offices, and the attic the caretaker's quarters. The annex is to be for Weights and Measures and Examining Warehouse.

Plans, &c., prepared and work supervised by this Department.
Clerk of Works, Mr. J. A. Trimble.
Contractors, Messrs. Perry, Masson & MacCullough, Brampton.

CAYUGA.

POST OFFICE.

This building, which was described in my report of last year was completed, and supplied with a hot water heating apparatus, and is now being fitted up and furnished for occupation.

Plans, &c., prepared and work supervised by this Department.
Contractors for building and fittings, Messrs. Draper Bros., Caledonia.
Contractor for heating apparatus, Mr. Adam Black, Hamilton.

CHATHAM.

POST OFFICE, &C., BUILDING.

Post Office lobby flooring was re-laid and sundry doors refitted.

COBOURG.

POST OFFICE, CUSTOM HOUSE, &C.

A contract for the erection of an addition on the western side, 18 feet in width by the depth and height of the building, was entered into on the 15th December, 1888, and the work is now in progress. The side and rear walls are of brick, and the front of Ohio sandstone, the work being similar to the original. The ground floor of the addition will consist of a stairway and an Examining Warehouse with offices over.

Plans, &c., prepared and work supervised by this Department.
Clerk of Works, Mr. Wm. Battell.
Contractors, Messrs. R. & J. Henderson, Cobourg.

CORNWALL.

POST OFFICE, &c., BUILDING.

Petty general repairs were executed.

GANANOQUE.

POST OFFICE.

This building, which was described in my report of last year, has since been completed, supplied with a hot water apparatus and fitted up for occupation.

Plans, &c., prepared and work supervised by this Department.

Clerk of Works, Mr. R. Brough, Gananoque.

Contractor, Mr. Geo. Wilson, Gananoque.

GODERICH.

POST OFFICE, &c., BUILDINGS.

Lot 5, on the south side of West street, containing half an acre, was acquired from T. N. Dancey for a site, and on 12th November, 1888, a contract was entered into for the construction of a two and a half-story and basement building 46 feet 6 inches by 34 feet on plan, with a one story and basement stone annex, 34 feet by 14 feet 3 inches. The building is to consist on the ground floor of the Post Office and Examining Warehouse, on the first floor the Customs and Inland Revenue Offices, and in the attic the caretakers apartments.

Plans, &c., prepared, and work supervised by this Department.

Supervising Architect, Mr. G. F. Durand, London, Ont.

Clerk of Works, Mr. Edward Sharman.

Contractors, Messrs. Tambling & Jones, London.

GUELPH.

POST OFFICE.

A hot water heating apparatus has been put in from plans prepared by and under the supervision of this Department.

Contractor, Mr. John Sims, Toronto.

HAMILTON.

DRILL SHED.

Building completed, the armories supplied with a hot water heating apparatus, and occupied.

Plans and specifications for construction of building prepared by Mr. H. James, Architect, Department of Militia and Defence.

Plans and specifications for heating apparatus prepared by this Department.

Superintending Architect, Mr. C. W. Mulligan, Hamilton.

Clerk of Works, Mr. Wm. Casey.

Contractor for building, Mr. M. A. Pigott, Hamilton.

Contractor for heating apparatus, Mr. Adam Clark, Hamilton.

POST OFFICE, &c., BUILDING.

Some additions to the gas piping and heating were made, inside blinds were supplied to the windows of several offices, and various ordinary repairs executed.

KINGSTON.

PENITENTIARY.

The following works were executed by this Department:—

South Workshops.—The stone floor flagging was renewed and walls re-pointed; an underground pipe duct, 76 feet long, carried under dome, to the eastern and western wings; doors leading to the dome and offices were put in; walls and ceilings plastered; door and window frames repaired, and all wood work painted three coats.

Block "B" Dormitory.—New 2-inch pine floors were laid in the cells, and walls of the cells painted 2 coats in oil; the iron work japanned; the walls of the rooms and vaults of dining hall and inside offices of the western and southern boundary walls were re-pointed in cement.

Engine House.—In order to obtain room for an airing yard the old fire engine house of the eastern building was demolished and a two story building west of the same building converted into an engine and hose-reel house by raising the upper floor 1 foot 6 inches, enlarging the doorway and repairing wood work.

Protestant Chapel.—The walls were re-plastered and walls and ceilings re-painted.

Ventilating Flues.—Brick ventilating flues were built in southern walls of dining hall, one for ventilation and the other to carry off steam from the kitchen.

Water Supply.—The system was changed, so that all water is now pumped into and gravitates from main tank.

Workshops, Water Closets, Etc.—These having become out of repair were taken out and replaced by eighteen automatic flushing hoppers, having automatic flushing attachments, six urinals and three sinks.

Heating.—The heating coils of the Warden's office and female prison, which were previously connected with principal steam main and return pipes, were disconnected therefrom and furnished with a separate main from boilers, and several minor works and repairs and alterations, &c., were done to the various buildings.

Building under supervision of Mr. John Bowes, Architect.

LINDSAY.

POST OFFICE, CUSTOMS AND INLAND REVENUE OFFICES.

This building, which was described in my report of last year, has since been carried on steadily, and is expected to be completed for occupation during this autumn. Plans were prepared and a contract entered into for the construction of a hot water heating apparatus.

Plans and specifications and works supervised by this Department.

Clerk of Works, Mr. H. Walters, Lindsay.

Contractor for construction of the building, Mr. P. Navin, Lindsay.

Contractor for heating apparatus, Mr. E. Woods, Lindsay.

NAPANEE.

POST OFFICE AND CUSTOM HOUSE AND INLAND REVENUE.

The works in connection with this building, which was described in my report of last year, have been in steady progress since, and the building is expected to be completed this autumn. Plans, &c., have been prepared for a hot water heating apparatus.

Plans, &c., prepared and works supervised by this Department.

Supervising Architect, Mr. F. Bartlett, Napanee.

Clerk of Works, Mr. J. E. Herring.

Contractor, Mr. George Newlands, Kingston.

OTTAWA.

CENTRAL EXPERIMENTAL FARM (NEAR OTTAWA).

The following works, referred to in my report of last year, have been completed, viz.:—

Residence of the Superintendent-General.

Four residences for the staff officials.

Barn and stabling.

Museum and offices.

Heating apparatus for the residences, museum and offices.

On 30th July, 1888, a contract was entered into for the construction of a building for greenhouses and seed stores. The latter will be a one and a-half story brick building on a stone foundation, having a ground floor, containing a seed room,

24 feet by 17 feet; a potting room, 37 feet by 16 feet, and two rooms above. Adjoining the potting room are two greenhouses of wood, on a stone foundation, 80 feet 6 inches by 13 feet, and 80 feet 6 inches by 14 feet, respectively.

A hot water heating apparatus has been put in, and the building is now occupied.

In August last a contract was entered into for the construction of a one-and-a-half story building, 100 feet by 30 feet, for a hennery, which building was completed during the year.

On 23rd October a contract was entered into for the construction of a cottage, known as No. 1 Cottage, near the barn, and also for a stable for the Superintendent, both of wood on stone foundations. The cottage will contain an unfinished basement; a ground floor to contain a parlor, a kitchen, a pantry, a store room and a shed; and an attic with three rooms. The stable will contain a carriage room, stalls, and a loose box, and a loft over.

Plans and specifications prepared and work carried out under the superintendence of this Department.

Clerk of Works for Superintendent's residence, barn and stabling, museum and offices, No. 1 Cottage, seed stores and conservatories, hennery, Superintendent's stables, alterations of farm cottages, the various heating and gas apparatus and minor works and fittings, Mr. W. J. Beckett.

Clerk of Works for four staff residences, Mr. James Gibson.

Contractor for Superintendent-General's residence, Mr. F. Toms.

Contractors for four staff residences, Cottage No. 1 and Superintendent-General's stables, Messrs. Tobin & O'Keefe, Ottawa.

Contractor for barn and stabling, museum and offices, and the hennery, Mr. William Stuart.

Contractor for seed stores and conservatories, Messrs. Beaudet & Desjardins.

Contractor for heating apparatus, Superintendent-General's residence, and four staff residences, Messrs. F. G. Johnson & Co., Ottawa.

Contractor for heating apparatus for museum and offices, conservatories and seed stores, Messrs. Garth & Co., Montreal.

GOVERNMENT HOUSE.

The decayed shingles of the hall roof were removed and replaced with galvanized iron.

All the connections with the drains were opened and tested by a sanitary engineer employed by the Governor General, all decayed flooring in basement was renewed and a portion of one of the basement rooms partitioned off and shelved for use as a wine cellar. Furnaces, stoves and pipes were repaired and cleaned, blankets, window curtains, blinds, carpets, chair-covers, crockery, china and glassware were supplied; a considerable number of the rooms were distempered, tinted, painted, papered and the necessary repairs to window glazing made.

The drain in court-yard was opened and cleaned; 650 feet of trench was opened and a 6-in tile drain laid therein to connect cottage with drainage system; 465 feet of trench was opened and a 2-inch gas pipe laid to laundry; 2,200 lin. feet of boundary fence and 3,300 lin. feet of 3-rail fence were rebuilt; 660 lin. feet of boundary fence and 1,000 feet of picket fence were repaired and 400 feet of sidewalk, 3 feet 4 inches wide, were laid.

Carpets were taken up, beaten and relaid; the usual general cleaning was done and the conservatories, gardens, lawns and grounds were attended to and kept in good order.

Under superintendence of this Department.

Clerk of Works, Mr. Wm. Hutcheson.

EASTERN AND WESTERN BLOCK, DEPARTMENTAL BUILDINGS.

Essential repairs, cleaning, distempering, painting, pointing outside walls, furnishing and fitting were done, under the supervision of the Department.

NEW DEPARTMENTAL BUILDINGS, WELLINGTON STREET.

Specifications and drawings were prepared and tenders received for three passenger elevators and one freight elevator, which are now being erected; the iron staircase and heating apparatus were completed, and the building is being fitted up for occupation, and was so far advanced that the second floor was occupied by the Indian Department on the 1st May.

Plans, &c., prepared and work superintended by this Department.

Clerk of Works, Mr. Samuel Adams.

Contractor for construction of building, Mr. A. Charlebois, Quebec.

Contractor for heating apparatus, Messrs. Garth & Co., Montreal.

Contractor for elevators, Mr. Jno. Fenson, Toronto.

PARLIAMENT BUILDING.

The roof covering of Library was renewed in copper; the apartments of the Speaker of the Senate were altered, two additional rooms fitted up, painted, papered and furnished, and a quantity of furniture supplied and renewals effected to the rooms throughout.

Usual and ordinary alterations, repairs and renewals were made, cleaning and painting done, and furniture and fittings supplied to the offices, &c., throughout the building.

Works executed under the supervision of this branch of the Department.

PRINTING BUREAU.

This building, which was described in a previous report, is nearly completed, and is being fitted up for occupation.

Plans and specifications prepared and work superintended by this Department.

Superintending Architect, Mr. J. P. M. Lecourt.

Clerk of Works, Mr. H. L. Pinard.

Contractor, Mr. John E. Askwith, Ottawa.

PARLIAMENT GROUNDS.

These were satisfactorily maintained.

MAJOR'S HILL PARK.

The grounds have been kept in good order, and sundry improvements made in walks, grass plots, &c.

PUBLIC BUILDINGS, REPAIRING STREETS, &c.

Little Sussex street, from Sussex street to the canal basin, as well as Canal street east, and Canal street west, throughout their entire length, were graded and macadamised.

Repairs were made to St. Patrick's street Hill roadway, steps and sidewalk; to Wellington street roadway and sidewalk, and to the fence and sidewalk at Cartier Square.

The various roadways, sidewalks and footpaths were kept clear of snow during the winter.

VICTORIA HALL.

The basement floor was laid in cement and ceiled in wood. On street fronts arched brick areas, with plate glass lights, flush with sidewalk, were built at basement windows; a stone boundary wall was built on O'Connor and Queen streets and on the western boundary of the lot, and the yard graded.

Plans, &c., prepared and work supervised by this Department.

Clerk of Works, Mr. Samuel Adams.

PEMBROKE.

POST OFFICE.

This building, which was described in my report of last year, is now in progress, and is expected to be complete and ready for occupation by the close of the fiscal year 1889-90.

Plans, &c., prepared and works superintended by this Department.

Clerk of Works, Mr. T. L. Morris, P.L.S., Pembroke.

Contractors, Messrs. Munro, Beatty & Grieve, Pembroke.

PETERBOROUGH.

POST OFFICE.

Arrangements are being made to provide and fit up in the tower a clock, with illuminated dials.

PORT ARTHUR.

POST OFFICE.

Negotiations with a view to obtain a site are in progress.

PRESCOTT.

POST OFFICE, CUSTOM HOUSE AND INLAND REVENUE OFFICES.

These buildings which were described in my report of last year are being proceeded with.

Plans, &c., prepared and works superintended by this Department.

Clerk of Works Mr. D. Barr, Prescott.

Contractors, Messrs. Crain & Mix, Prescott.

ST. THOMAS.

POST OFFICE, &c., BUILDING.

THE Post Office lobby floor was re-laid, and partial repairs, &c., have been made to plumbing, &c.

Superintending Architect, Mr. Charles Horton, St. Thomas.

TORONTO.

CUSTOM HOUSE.

Sundry alterations and repairs were made in the offices; the basement walls and ceilings were whitewashed, and the boilers re-covered with patent boiler covering.

Supervising Architect, Mr. D. B. Dick, Toronto.

EXAMINING WAREHOUSE.

The flooring of the ground floor and part of the first floor was renewed, some minor alterations made in the machinery, and also some painting, whitewashing and general repairs.

Specifications, &c., prepared and work supervised by Mr. D. B. Dick, Architect.

INLAND REVENUE OFFICES.

Sundry minor repairs were done to heating apparatus and plumbing, and smokestacks, with revolving cowls, were put up.

Under supervision of this Department.

POST OFFICE.

General repairs and sundry minor alterations were made to heating, plumbing, woodwork, &c., some furniture was supplied, and an office was fitted up and furnished for Customs parcels in bond.

Supervising Architect, Mr. D. B. Dick, Toronto.

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TRENTON.

POST OFFICE, &c.

This building, which was described in my report of last year, has been carried on nearly to completion, and is being fitted up with a hot water apparatus, and the fittings and furniture for the use of the officials of the various departments.

Plans, &c., prepared and work superintended by this Department.

Clerk of Works, Mr. Geo. Crowe.

Contractor, Mr. Walter Alford, Belleville.

PROVINCE OF MANITOBA

BRANDON.

POST OFFICE.

A site, with a frontage of 96 feet on Rosser avenue, by a depth of 100 feet, was obtained, and on 18th day of June last a contract was entered into for the construction of a building thereon. The building will comprise a main portion, 82 feet by 41 feet, to consist of a stone basement surmounted by three stories and an attic, in brick; and a one-story brick annex, 35 feet by 30 feet. On the ground floor will be the Post Office, the Examining Warehouse, the Gas Inspector's Office, and the Weights and Measures Office; on the first floor the Customs Office, Land Offices and vault; and on the second floor the Inland Revenue Offices and caretaker's apartments—the attic to be unfinished.

Plans and specifications prepared by this Department.

Superintending Architect, Mr. W. B. Marshall, Brandon.

Clerk of Works, Mr. F. J. Chubb.

Contractor, Mr. James Hanbury, Brandon.

ST. PAUL'S.

INDUSTRIAL SCHOOL.

On 13th May, 1889, a contract was entered into for the construction of a school building, a laundry, a cow house, a stable, closets, &c.

School Building.—A "T" shaped 2½ story brick building, on a stone foundation, with wooden roof, floors and partitions, the front portion to be 80 feet by 33 feet 6 inches and the rear portion 33 feet 6 inches by 33 feet 6 inches. On the ground floor are to be two class rooms, two offices, a dining room, a kitchen, a scullery and a pantry; on the first floor two dormitories, nine bedrooms, and two wash and bath rooms, and in the attic eleven rooms.

Laundry.—A two-story wooden building, on a stone foundation, 24 feet by 20 feet.

Cow House.—A one-story wooden building, 28 feet by 24 feet.

Stable and Carriage House.—A one-story and loft wooden building, on a pile foundation, 33 feet by 21 feet.

Plans prepared by this Department. Supervised by Mr. D. Smith, Clerk of Works, Winnipeg.

Contractors, Madden & Bruce, Winnipeg.

STONY MOUNTAIN.

MANITOBA PENITENTIARY.

Prison Building.—General repairs were made, electric bells and water tanks were put in, and a partition inclosing engine room.

Warden's Residence.—General repairs, painting, kalsomining and papering walls and alterations of heating pipes were made.

Surgeon's and Chaplain's Residences.—On the 24th January, 1889, a contract was entered into for the construction of three similar buildings to accommodate the

surgeon and the Roman Catholic and Episcopal chaplains. In each case the building is to be a one and one-half story of brick, resting on stone foundation, with wooden partitions and roof. The basement will contain a dining room, a kitchen, a servant's room, a store and furnace room; the ground floor a parlor, a reception room, a library, a breakfast room, a bedroom, a bath room and a hat room, and the attic four bedrooms. Special drains, with cess pool, are being put in, as the distance to connect with the general system of drainage is too great. Wells are being sunk, one for each residence, by convict labor.

Warden's Stables.—This building, described in my report of last year, has since been completed.

Hospital Building.—A passage from prison was constructed and the building supplied with additional urinals, attic window gratings, stone porch, lamps, furniture, &c., and the works referred to in my report of last year were completed.

Deputy Warden's Stables.—This stable, coach and outbuildings over, 46 feet by 27 feet, was constructed by convict labor.

Laundry Building.—Fittings referred to in last year's report completed and a well sunk.

Guards' Cottages.—A quantity of necessary painting, plastering and kalsomining was made.

Plans, &c., prepared by this Department.

Clerk of Works, Mr. D. Smith.

Contractor for surgeon's and chaplain's residences, Messrs. Tobin & O'Keefe, Ottawa.

WINNIPEG.

CUSTOM HOUSE.

Some minor repairs were made, some additional furniture supplied and electric bells put in.

Resident Clerk of Works, Mr. D. Smith.

LANDS OFFICE.

General repairs, plastering, painting, the supply of new furniture, linoleum, &c., were made, under the supervision of the resident Clerk of Works, Mr. D. Smith.

TEMPORARY POST OFFICE.

Sundry repairs and alterations necessary to render the building suitable for use as an Examining Warehouse have been carried out, under the supervision of the resident Clerk of Works, Mr. D. Smith.

NORTH-WEST TERRITORIES.

CALGARY.

BARRACKS.

Minor repairs at the Commandant's quarters and Assistant Commissioner's quarters were made.

The barracks building referred to in my report of last year is nearly complete, and the mess-room being now occupied as a dormitory, and the hospital is complete ready for occupation.

Plans, &c., prepared and work carried out under the supervision of this Department.

Clerk of Works, Mr. H. D. Johnson.

Contractors, Messrs. Kennedy & Heney, Ottawa.

COURT HOUSE.

On 8th November, 1888, a contract was entered into for the construction of a two story stone Court House, having brick partitions and wooden floors and roof, and

measuring 91 feet by 51 feet on plan. On the ground floor are to be rooms for sheriff, grand jury, barristers, witnesses, jailers and prisoners; a vault, water closets, a furnace room, and a fuel room—the two last mentioned going from the ground floor ceiling to below the level of the ground. On the first floor are the court room, rooms for judges, barristers and jury, and water closets.

Plans, &c., prepared and work supervised by this Department.

Clerk of Works, Mr. H. D. Johnson

Contractor, Mr. John Gillies McCallum, Calgary.

INDIAN HEAD.

EXPERIMENTAL FARM BUILDINGS.

On 5th November, 1888, a contract was entered into for the construction of the following buildings, which are now in progress:—

Superintendent's Residence.—A wooden two-story building, with a stone basement, the main building 42 feet by 34 feet, and a kitchen wing 24 feet by 21 feet; to have on the ground floor a hall and staircase, a parlor, a library, a dining room, an office, a kitchen, two pantries, a wash-room, back stairs, &c., and on the first floor, nine bedrooms, a bath-room, a closet, &c.

Horticulturist's Residence.—A wooden two-story building, 32 feet by 35 feet, on a stone basement, with a lean-to summer kitchen, 25 feet by 10 feet, in the rear, and to contain a parlor, an office, a dining room and a pantry on the ground floor, with five bedrooms and a bath-room over.

Workmen's Cottage.—A wooden one and a half story cottage, 27 feet by 21 feet, on a stone basement, with a lean-to summer kitchen, 14 feet by 10 feet in the rear, and to contain a parlor, kitchen and store room on the ground floor, with three bedrooms and pantry over.

Barn and Stabling.—These are to be of wood, and consist of a main building 111 feet by 50 feet, 40 feet in height, on a 12 feet stone basement, and a wing 65 feet by 32 feet, and 32 feet in height. The basement is arranged to accommodate horned cattle and horses, the ground floor as a driving floor, and for hay storage.

Plans, &c., prepared and work carried on under the supervision of this Department.

Clerk of Works, Mr. Angus Mackay.

Contractor, Mr. Isaac R. Reilly, Regina.

MACLEOD.

BARRACKS.

On 2nd November, 1888, a contract was entered into for the construction of a stable for the North-West Mounted Police, which is now completed.

The building consists of a main portion, 131 feet 6 inches by 29 feet 6 inches, containing fifty-one stables, and a harness or saddle room, 40 feet by 14 feet, adjoining. Over the main portion is a low loft.

Plans, &c., prepared and work superintended by this Department.

Clerk of Works, Mr. H. J. Peters, Regina.

Contractors, Messrs. Williams & Willoughby, Regina.

PRINCE ALBERT.

COURT HOUSE AND GAOL.

A kitchen for the use of the gaol was formed in basement under Court House.

Clerk of Works, Mr. H. J. Peters.

QU'APPELLE.

INDUSTRIAL SCHOOL.

The girls' school, bake-house and carpenter's shop were completed.

Plans, &c., prepared by this Department.

Clerk of Works, Mr. H. J. Peters.

REGINA.

BARRACKS.

New lead-lined wash troughs, with necessary connections, were provided and placed in the north and south men's barracks.

Clerk of Works, Mr. H. T. Peters, Regina.

COURT HOUSE.

A hot air furnace with connections was placed in the basement.

Resident Clerk of Works, Mr. H. T. Peters.

INDUSTRIAL SCHOOL.

On 14th May, 1889, a contract was entered into for the construction of an Industrial School at White Farm, near Regina, which is now in course of erection. The building is to be "T" shaped, and consist of a front portion, 180 feet by 37 feet, with a rear wing 75 feet by 37 feet. There is to be a stone basement and two full stories of brick. On the ground floor are to be a general assembly room, a dining room, a class room, a sewing room, a teacher's dining room, a reception room, two rooms for Principal, a kitchen, a laundry, a scullery, a larder and a coal shed; and on the first floor a girls' dormitory, a boys' dormitory, a drying room, eleven bedrooms and a bath-room.

Resident Clerk of Works, Mr. H. T. Peters.

Contractors, Messrs. Williams & Willoughby, Regina.

JAIL AND LUNATIC ASYLUM.

Minor alterations of the ground floor portion of Jailer's apartments and offices were made, an iron staircase built between ground and first floor of jail, and iron doors, one in wall between prison and Jailer's apartments, and the other in wall between basement and yard.

Resident Clerk of Works, Mr. H. T. Peters.

NEW RESIDENCE FOR THE LIEUTENANT GOVERNOR.

On the 19th March, 1889, a contract was entered into for the construction of this building on the Government reserve, and the works are now in progress.

The building will be of brick on a stone foundation, with partitions, floors and roofs of wood, to consist of a main portion 64 feet 6 inches by 55 feet, and that for servants, offices and bedrooms 56 feet by 42 feet.

The basement will accommodate the furnace, fuel and stores and contain brick tanks for rain and well water. On the ground floor there will be a lobby, vestibule and main hall and staircase, two drawing rooms, dining room, library, billiard room, kitchen, housekeeper's room, servants' hall, scullery, dairy, cooling room, sewing room, storeroom, china pantry, wine vault, brick safe and lavatory; and on the first floor are to be fifteen bedrooms, two dressing rooms, with bath, also a bath-room and a watercloset.

Plans, &c., prepared and work executed under the supervision of this Department.

Clerk of Works, Mr. H. T. Peters.

Contractor, Mr. Wm. Henderson, Regina.

OLD GOVERNMENT HOUSE.

A coal shed and an ice house were built, and minor general repairs to buildings and outhouses made.

RIDING HALL.

On 3rd November, 1888, a contract for the erection of a riding hall, to replace that destroyed by fire, was entered into and the works are now in progress. With the exception of a porch, 20 feet by 20 feet, at the main entrance, the building will be similar to that destroyed. The building will be of wood, 125 feet by 210 feet, exclusive

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of the porches, and consists of a riding hall 73 feet by 199 feet, four sheds 73 feet by 26 feet, two sheds 55 feet by 26 feet, and gymnasium 74 feet by 25 feet, with an assembly room over of the same size.

Plans, &c., prepared and work supervised by this Department.

Clerk of Works, Mr. H. T. Peters.

Contractor, Mr. J. Stewart, Ottawa.

PROVINCE OF BRITISH COLUMBIA.

KAMLOOPS.

INDIAN INDUSTRIAL SCHOOL.

On 4th June, 1889, a contract was entered into for the construction of three wooden buildings on stone foundations, as follows:—

Central Building.—To consist of a main building, 31 feet by 34 feet, and an annex 25 feet by 18 feet; to contain on the ground floor a large diningroom, a Superintendent's sitting room, a Superintendent's office, a kitchen and a hall; and on the first floor two school rooms, a sick room, a Superintendent's bedroom and closets.

Boys' Building.—A building 40 feet 9 inches by 33 feet 6 inches, to contain on the ground floor a boys' play-room, a dormitory, a tailor's room, a teacher's room, a lavatory, two bath-rooms and a hall; and on the first floor two boys' dormitories, a teacher's bedroom, a spare room, a passage and closets.

Girls' Home.—A building 30 feet 6 inches by 22 feet, to contain on the ground floor a laundry, an ironing room and a drying room; and on the first floor two girls' dormitories, a servants' bedroom and closets.

Plans, &c., prepared by this Department, and work being carried out under the supervision of Mr. F. C. Gamble, C.E.

Clerk of Works, J. T. Burnyeat.

Contractor, Mr. John D. Ross, Kamloops.

KUPER.

INDIAN INDUSTRIAL SCHOOL.

A contract for the construction of these buildings, which are similar to those at Kamloops, was entered into on the 27th May, 1889, and they are being carried out under the supervision of Mr. F. C. Gamble, C.E.

Clerk of Works, Mr. Walter Ford.

Contractor, Mr. William Rockett.

NANAIMO.

POST OFFICE, &c.

Some minor repairs to the roof were executed.

NEW WESTMINSTER.

PENITENTIARY.

On the 23rd April, 1889, a contract was entered into for the construction of a two-story wooden building, on a stone foundation, to be used as a residence for the Warden of the Penitentiary. This will have a main building 55 feet by 48 feet, and a wing 30 feet 6 inches by 20 feet, containing on the ground floor drawing room, dining room, library, bedroom, hall, kitchen, scullery, pantry and conservatory, and on the first floor seven bedrooms, bathroom and hall.

The dwelling for single officers referred to in my last report has been completed, a verandah along the front added, the sitting and dining rooms furnished with grates, and the building heated with stoves throughout.

A cow-house was built by convict labor with material supplied by this Department.

Gas was laid throughout the grounds, cast-iron lamp-posts erected, and several extra gas lights placed in the main building.

Some alterations and repairs to the water service were made.

Several improvements to the bakery were made.

An alarm bell was set up in a suitable tower on the roof of the prison.

Works carried out under the supervision of Mr. F. C. Gamble, C.E.

Contractors for warden's residence and cottage, Messrs. Ackerman Bros, New Westminster.

PUBLIC BUILDING.

Minor general repairs were made and several articles of furniture supplied to the Post Office portion of the building, and latrines were substituted for the earth closets.

Works executed under the supervision of Mr. F. C. Gamble, C.E.

VANCOUVER.

POST OFFICE, &C., BUILDING.

A site on the corner of Pender and Granville streets, with frontages of 130 feet and 75 feet, respectively, was offered, and plans and specifications for the building are now being prepared by this Department.

VICTORIA.

CUSTOM HOUSE.

Repairs to gas and water pipes, water tank, wash-basin, &c., &c., under the supervision of Mr. F. C. Gamble, C.E.

POST OFFICE.

Repairs were made to the fire walls. New fittings for the Postmaster and letter carriers were supplied, a stamp vendor's stall was erected, stoves were supplied, and gas fittings re-arranged for the Money Order Branch.

Works executed under the supervision of Mr. F. C. Gamble, C.E.

GENERALLY.

Usual and ordinary repairs were made, furniture supplied, cleaning and coloring done and minor alterations made to a large number of buildings not herein referred to.

WATER FOR DOMINION BUILDINGS.

The water supply of the various Dominion buildings, excepting penitentiaries and military buildings, is under the control of this branch of the Department. Fifty-four buildings at thirty-three localities have water services connected with the water supply of the local waterworks companies, the remainder being in general supplied with wells, pumps and tanks.

LIGHTING DOMINION BUILDINGS.

The lighting of the various Dominion buildings, excepting the penitentiaries and military buildings, is under the control of this branch of the Department. Sixty buildings, exclusive of those at Ottawa, were lighted by gas supplied by local companies, two buildings by incandescent electric light, one by gasoline and the remainder by coal oil. At four of the last mentioned an arc light was used for outside illumination.

HEATING DOMINION BUILDINGS (FUEL).

Tenders for the supply of coal for Public Buildings, generally, were invited by public advertisement, and coal and wood were supplied to eighty-eight of the public buildings.

ENGINEERS, ENGINEMEN, FIREMEN, &c., PUBLIC BUILDINGS.

The various engineers, enginemen, firemen and caretakers, and the heating apparatus of Dominion Public Buildings, with the exception of those at the various penitentiaries and the military buildings, are under the control of this branch of the Department.

THOMAS FULLER,

Chief Architect.

APPENDIX No. 3.

L I S T

OF

ENGINEERS, ENGINEMEN, FIREMEN AND CARETAKERS

OF

PUBLIC BUILDINGS THROUGHOUT THE DOMINION,

GIVING

DATE OF APPOINTMENT, SALARY PAID, &C.

APPENDIX No. 3.

Ref. No. 103,121.

STATEMENT showing the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings, on 30th June, 1889.

Place.	Building.	Name.	Position.	Date of Appointment.	Salary per Month.	Time Employed per Annum.	Total Salary per Annum.
					\$ cts.		\$ cts.
Anherst.	Post Office.	James Morrison.	Caretaker.	November 2, 1886	33 33	12 months.	400 00
Antigonish	Public Building.	H. P. Hill.	do	March 1, 1887	3 75	12 do	45 00
Arichat	Building on P. O. site.	John McAskill.	do	September 16, 1887	1 25	12 do	15 00
Baddeck	Public Building.	Alex. S. McDonald	do	December 23, 1886	16 67	12 do	200 00
Halifax.	Dominion Building.	John Powell.	Engineer	October 1, 1871	62 50	12 do	750 00
do	do	Richard Power	Fireman	do 1, 1871	50 00	9 do	450 00
do	do	M. Sullivan.	Caretaker.	do 31, 1885	33 33	12 do	400 00
do	do	John Dunn	Watchman	April 1, 1887	39 00	12 do	468 00
do	Examining Warehouse	Wm. Power	Caretaker.	January 26, 1887	41 67	12 do	500 00
New Glasgow	Post Office.	Jeff. Fraser.	Temporary Caretaker	October 1, 1888	33 33	12 do	400 00
North Sydney	Public Building.	C. P. Moffatt.	do	February 6, 1889	33 33	12 do	400 00
Pictou	Custom House	Geo. Robson.	Caretaker.	January 31, 1888	33 33	12 do	400 00
Truro	Post Office.	Hugh McCulloch.	do	September 22, 1888	33 33	12 do	400 00
Windsor	do	J. W. Smith	do	July 20, 1886	33 33	12 do	400 00
Yarmouth	Public Building.	Robert Speers.	Engineer	December 23, 1886	33 33	12 do	400 00
Charlottetown	Dominion Building.	D. McLeod.	Fireman	September 13, 1872	33 33	12 do	400 00
do	do	J. S. McLeod	Watchman	December 13, 1887	28 00	12 do	336 00
do	do	James Grant.	do	August 18, 1881	37 00	12 do	444 00
do	do	George Walker.	do	January 13, 1875	37 00	12 do	444 00
Montague	Public Building.	Martin Lambert	Caretaker.	January 12, 1887	10 00	12 do	120 00
Summerside	Dominion Building.	James Brazil.	do	November 5, 1885	33 33	12 do	400 00
Bathurst.	Post Office.	J. A. Melancon	do	April 13, 1887	33 33	12 do	400 00
Fredericton	do	Jas. Perkins	do	May 31, 1881	33 33	12 do	400 00
Moncton	do	E. B. Hicks.	do	January 11, 1886	33 33	12 do	400 00
Newcastle	do	Patrick Keating	do	October 2, 1886	33 33	12 do	400 00
St. Stephen	do	Samuel Topping	do	May 25, 1887	33 33	12 do	400 00
Sussex	do	Thos. Ashill	do	October 17, 1883	33 33	12 do	400 00
St. John	Custom House	G. H. Jones	Engineer.	February 17, 1880	60 00	12 do	720 00
do	do	Christopher White	Fireman	November 9, 1885	50 00	6 do	300 00
do	do	T. W. Shaw	Caretaker.	December 8, 1881	41 67	12 do	500 00
do	Post Office.	Henry Howe.	Engineer.	November 4, 1881	55 00	12 do	660 00
do	do	Ed. Hauey	Hoist Attendant	do 27, 1882	45 00	12 do	540 00

do	Penitentiary	Geo. Campbell.	Caretaker.	October	29, 1880.	37	50	12	do	450	00
Woodstock	Post Office.	Richard Maxted	do	do	8, 1885.	33	33	12	do	400	00
Coaticook	Public Building.	Israel Baldwin.	do	June	27, 1889.	33	33	12	do	400	00
Hull	Post Office.	Thomas Paquin.	do	January	9, 1888.	16	66	12	do	200	00
Montreal	Dominion Building.	Thos. Ryan.	Foreman	March	4, 1882.	85	00	12	do	1,020	00
do	Examining Warehouse.	M. Beyer.	Fireman.	do	4, 1882.	50	00	12	do	600	00
do	Post Office.	L. D. Thibault.	Engineer	October	18, 1876.	65	00	12	do	780	00
do	do	do	Electric Light and Hoist Attendant.	June	1, 1885.	60	00	12	do	720	00
do	Inland Revenue.	F. Greene.	Engineer	January	1, 1885.	60	00	12	do	720	00
do	Custom House.	W. Wallace.	Fireman.	October	1, 1882.	50	00	8	do	400	00
do	do	J. H. Marchand	do	December	2, 1882.	50	00	8	do	400	00
do	Drill Hall and Armouries.	Wm. McDonald	Engineerman.	February	21, 1888.	45	00	12	do	540	00
Quebec.	Examining Warehouse.	Jas. Matthews.	Engineer	December	4, 1885.	55	00	12	do	690	00
do	do	Wm. Stephens	Fireman	October	29, 1886.	40	00	8	do	320	00
do	Cullers' Office.	John O'Neil.	do	September	8, 1886.	45	00	8	do	360	00
do	Public Building	Thos. Rawson.	Caretaker.	December	12, 1884.	33	33	12	do	400	00
do	do	P. St. Michel.	do	September	22, 1886.	33	33	12	do	400	00
do	Post Office.	Widow J. Forrant	Watchman.	May	30, 1888.	16	66	12	do	200	00
do	do	Wm. Comper.	do	December	28, 1881.	12	50	12	do	150	00
do	Custom House.	J. B. Gerin-Lajoie	Caretaker.	September	18, 1888.	58	33	12	do	700	00
do	Post Office.	Jas. Charbonneau.	do	July	27, 1883.	33	33	12	do	400	00
do	Public Building	John Lovegrove.	do	November	5, 1885.	33	33	12	do	400	00
do	do	Wm. Shepherd.	do	April	6, 1888.	33	33	12	do	400	00
do	Post Office.	John Squires.	do	October	27, 1889.	50	00	12	do	600	00
do	Public Building.	Fred Edwards.	do	March	2, 1886.	33	33	12	do	400	00
do	do	J. P. Reeves	do	October	17, 1883.	50	00	12	do	600	00
do	do	Widow Aug. Menke	do	December	22, 1887.	33	33	12	do	400	00
do	do	Gilbert Campbell	do	October	8, 1885.	33	33	12	do	400	00
do	Post Office.	Henry Dunn.	Engineerman.	September	23, 1884.	50	00	7	do	350	00
do	do	W. W. Mitchell.	Caretaker.	January	7, 1885.	33	33	12	do	400	00
do	Public Building	Thos. Murphy.	do	March	7, 1885.	30	42	12	do	365	00
do	Post Office.	Thos. Petalack.	do	September	28, 1887.	15	00	12	do	180	00
do	Public Building	Wm. Kilgour	do	do	23, 1886.	33	33	12	do	400	00
do	do	A. H. Goodeve.	do	August	26, 1884.	33	33	12	do	400	00
do	do	Thos. P. Richardson	do	May	1, 1889.	8	33	12	do	100	00
do	do	Wm. Hornby	do	October	9, 1886.	50	00	12	do	600	00
do	do	Thos. Nicholson.	Engineer	do	9, 1886.	50	00	12	do	600	00
do	do	Thos. Beatty	Fireman	March	27, 1887.	50	00	12	do	600	00
do	Military College.	Wm. Johnson	Engineer	November	7, 1887.	45	00	12	do	540	00
do	do	M. Madden	Fireman.	May	31, 1881.	65	00	12	do	780	00
do	do	M. Mulken.	Engineerman.	October	12, 1878.	55	00	6	do	330	00
do	Post Office.	Wm. Greer	Engineerman.	September	18, 1888.	50	00	12	do	600	00
do	do	John Price.	Caretaker.	March	16, 1884.	33	33	12	do	400	00
do	Public Building.	John Wilkins.	Engineer	January	13, 1884.	50	00	12	do	600	00
do	do	John Irwin.	Caretaker.	September	13, 1886.	33	33	12	do	400	00
do	do	Wm. Armstrong.	do	do	8, 1887.	33	33	12	do	400	00
do	do	Levi Reynolds.	do	June	11, 1888.	20	00	12	do	240	00
do	do	F. H. Roberts.	Engineer	November	17, 1885.	33	33	12	do	400	00
do	do	Wm. Bryson.	Caretaker.	February	7, 1884.	50	00	12	do	600	00
do	do	Jas. Russell.	do	August	9, 1883.	33	33	12	do	400	00
do	do	do	do	September	4, 1885.	33	33	12	do	400	00

48 (APPENDIX No. 3)—STATEMENTS showing the Engineers, Enginemen, Firemen, Caretakers, Hoist Attendants and Watchmen employed at Dominion Public Buildings, on 30th June, 1889—*Continued.*

Place.	Building.	Name.	Position.	Date of Appointment.	Salary per Month.	Time employed per Annum.	Total Salary per Annum.
					— \$ cts.		\$ cts.
Toronto	Dominion Building	J. A. Willis	Foreman Engineer	August 23, 1873	125 00	12 do	1,500 00
do	Custom House	Jas. Humphreys	Fireman	November 16, 1881	50 00	6 do	300 00
do	Revenue Building	F. Simmons	do	January 21, 1887	50 00	6 do	300 00
do	Examining Warehouse	Jas. Cosgrave	Engineer	December 28, 1874	65 00	12 do	780 00
do	do	Ed. Appleton	Fireman	September 23, 1886	55 00	12 do	660 00
do	do	Alex. Day	Hoist Attendant	December 1, 1887	45 00	12 do	540 00
do	do	Wm. Chenery	do	do 1, 1887	45 00	12 do	540 00
do	do	Wm. J. Sleah	Watchman	March 2, 1888	45 00	12 do	540 00
do	do	Jas. Richardson	Engineer	September 3, 1888	1 50 per day	do	547 00
do	Post Office	Henry L. Bell	Fireman	May 9, 1885	50 00	6 months	300 00
do	do	Wm. Woods	do	October 5, 1888	50 00	6 do	300 00
do	do	James Claxton	do	do 25, 1882	50 00	6 do	300 00
Windsor	do	F. Parker	Engineman	do 3, 1888	50 00	12 do	600 00
do	do	W. Curtis	Caretaker	November 9, 1880	33 33	12 do	400 00
Winnipeg	do	J. P. Alexander	Engineman	June 1, 1889	70 00	12 do	840 00
do	do	Patrick Dillon	Fireman	January 1, 1889	45 00	6 do	270 00
do	do	Jos. Contu	Hoist Attendant	March 16, 1887	45 00	12 do	540 00
do	do	Ernest Lecourt	Watchman	October 27, 1887	45 00	12 do	540 00
do	do	Jos. Cauchon	Caretaker	June 12, 1888	50 00	12 do	600 00
Prince Albert	Court House and Jail	George Northgraves	do	do 14, 1887	33 33	12 do	400 00
Nanaimo	Public Building	John Thompson	do	November 10, 1883	50 00	12 do	600 00
New Westminster	do	John McMurphy	do	October 1, 1884	50 00	12 do	600 00

R. STECKEL.

APPENDIX No. 4.

REPORT

ON THE

HEATING APPARATUS, GAS, WATER AND BELL SERVICES, &c.

IN THE

PUBLIC BUILDINGS, OTTAWA,

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889,

BY

JOHN R. ARNOLDI, CHIEF MECHANICAL ENGINEER.

APPENDIX No. 4.

REPORT OF THE CHIEF MECHANICAL ENGINEER.

Ref. No. 101,754.

CHIEF MECHANICAL ENGINEER'S OFFICE,
OTTAWA, 28th August, 1889.

SIR,—I have the honour to report as follows, in reference to the Public Buildings, Ottawa, during the fiscal year ended the 30th June, 1889, viz. :—

PARLIAMENT BUILDING.

Nothing was required to be done during the past year to electrical apparatus, boilers, water, gas or bell service of this building beyond ordinary maintenance.

Owing to the alterations of the Speaker's apartments of the Senate it was found necessary to change and extend the ventilation and heating apparatus in the vicinity of these premises.

The ventilation of the Railway Committee room was also much improved by increasing the capacity of foul air-discharge ducts.

EAST AND WEST BLOCKS.

Nothing was required to be done in these buildings, beyond ordinary maintenance to heating apparatus, boilers, water, gas and bell services.

SUPREME COURT.

Ordinary maintenance to the heating apparatus, gas, water and bell services was all that was required.

OTTAWA POST OFFICE AND CUSTOM HOUSE.

Ordinary maintenance only was required to the heating apparatus, boilers, gas, water and bell services.

GEOLOGICAL MUSEUM.

Ordinary maintenance only to water, gas and bell services was required.

PARLIAMENT GROUNDS—FLOWER PROPOGATING HOUSE.

Ordinary maintenance only required.

INDIAN AFFAIRS (LEASED).

Ordinary maintenance only to water, gas and bell services was required.

POST OFFICE DEPARTMENT (LEASED). SAVINGS BANK BRANCH.

Three new waterclosets were placed in this building during the past year ; otherwise, ordinary maintenance to gas, water and bell services only was required.

MAJOR'S HILL PARK.

Ordinary repairs only were required to the water main, hose, &c., used for sprinkling.

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FISH HATCHERY AND ART GALLERY.

An extension of gas fixtures and one new water closet were found necessary.

RIDEAU HALL.

Eleven old-pattern pan waterclosets were removed and replaced by an improved sanitary pattern, which were urgently required. The hot water service was thoroughly overhauled and a new coil furnace put in for heating the water for baths, &c.

In the Secretary's cottage two new water closets were supplied.

Beyond ordinary maintenance and repairs to the general services of heating, water, gas and bells, nothing further was required.

I have the honour to be, Sir,

Your obedient servant,

JNO. R. ARNOLDI,
Chief Mechanical Engineer.

A. GOBEL, Esq.,
Secretary, Public Works Department.
Ottawa.

APPENDIX No. 5.

R E P O R T

ON

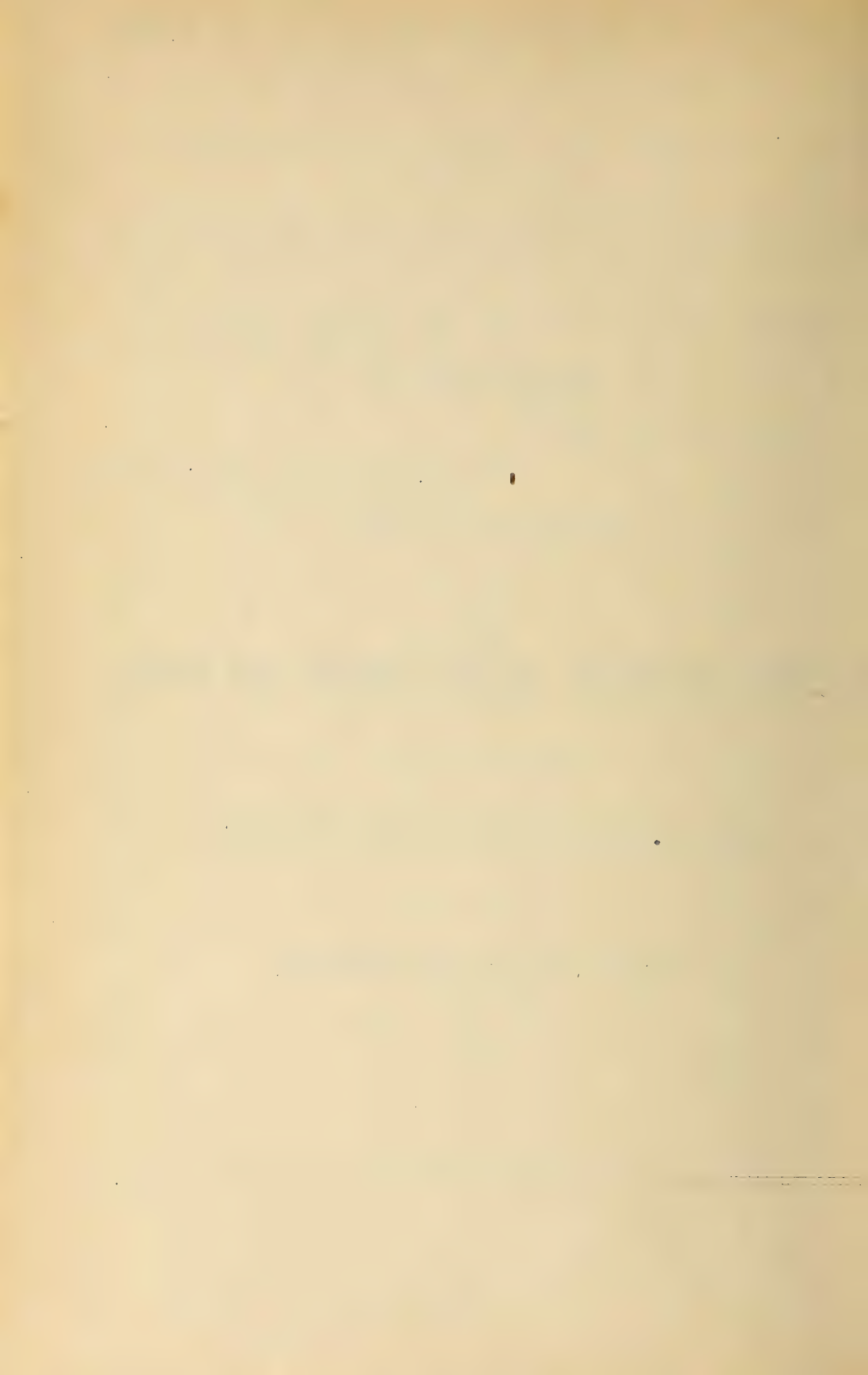
HARBOURS AND RIVERS, DREDGES, DREDGING AND SURVEYS

THROUGHOUT THE DOMINION

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889.

BY

HENRY F. PERLEY, CHIEF ENGINEER.



APPENDIX No. 5.

REPORT OF THE CHIEF ENGINEER.

Ref. No. 103,848.

CHIEF ENGINEER'S OFFICE,
OTTAWA, 27th November, 1889.

SIR,—I have the honour to submit herewith my annual report on the harbour works under my charge during the last fiscal year.

I have the honour to be, Sir,

Your obedient servant,

HENRY F. PERLEY,
*Chief Engineer.*A. GOBEL, Esq.,
Secretary Public Works Department,
Ottawa.

PRINCE EDWARD ISLAND.

ANNANDALE.

This Pier is in King's County, and is situated on the north side of Grand River, near its entrance into Boughton Bay. It is distant 14 miles by road, south from Souris, the eastern terminus of the P. E. I. Railway, and is the shipping place for a large agricultural district. The exports are agricultural produce and fish, and the imports consist principally of general merchandise and coal.

The pier is one of those constructed by the Local Government and taken over by the Dominion Government, and consists of an approach 300 feet in length and 23 feet wide, with a pier head 140 feet long, averaging 36 feet in width. The approach, excepting a short open span which is planked over, is constructed of squared timber crib-work, filled in with brush, stone and clay. The pier head consists of four blocks of different shapes and dimensions, constructed of squared timber crib-work, and of pile work, the whole being covered over with plank.

During 1884-85 such repairs as were absolutely necessary to make it serviceable for the seasons traffic were effected by the Department, the principal work done consisting in the close-piling of the western end of the face for a distance of 85 feet. During the last fiscal year the face, for a distance of 55 feet, and the ends, were close-piled; 22 piles were driven in the inside of the work to replace worm-eaten ones, and where necessary the planking on the top was renewed.

At low water springs, which rise here 5 feet, there is a depth of 7 feet of water at the channel face of the pier head, and the beach dries out to within 15 feet of the face.

BELFAST PIER.

Belfast Pier, Queen's County, is situated on the south side of Orwell Bay, about one mile distant from the village of Eldon. It was constructed many years ago by the Local Government to accommodate the shipment of produce from the neighborhood. Besides being an important shipping place, it is also a port of call for the steamers of the P.E.I. Navigation Co., plying during the season three times each week between Charlottetown and Orwell Bay.

[1889]

The pier is 600 feet in length and from 24 to 35 feet in width, with an "L" at the outer end 105 feet in length and 20 feet wide, giving a channel face of 140 feet. The work along the channel face is from 16 to 18 feet in height, and the depth of water varies from 5 to 7 feet at low water springs, which rise here 8 feet. At 10 feet from the face the depth increases to 9 feet, and the beach dries out at low water springs to within 200 feet of the outer end. Excepting two small openings, the work is constructed with squared timber faces, the inner end, for a distance of 390 feet, being filled in with brush and clay, while the outer end and the "L" are floored over.

During 1884-85, when the pier was taken over by the Dominion Government, it was strengthened by placing fenders along the channel face, and some slight repairs were made to the top by placing new planking where required.

During 1887-88 repairs were executed on the western end of the L., and along the channel face and end of this portion piles were placed, 5 feet apart, to replace those which had been placed in 1884-85, as they, weakened by the teredo, had been carried away by the ice.

The amount set apart for repairs to the pier last year was expended in the removal of a portion of the eastern end of the "L," and in its reconstruction, and the ballasting of and renewal of planking on the western end of the "L," and in levelling up and repairing the worst portion of the approach.

CAMPBELL'S COVE BREAKWATER.

Campbell's Cove, King's County, is situated on the north coast of the island, about 9 miles west from East Point and 14 miles distant from Souris, the eastern terminus of the P.E.I. Railway.

In 1872 the Provincial Government constructed a detached breakwater, 300 feet in length and 30 feet wide, on the reef which extends out from the west point of the cove, for the protection of small fishing vessels and boats.

During 1882-83 the Department repaired the old structure, raised it 2 feet in height, connected it with the shore, extended it 250 feet, making its total length 620 feet. The whole work is substantially constructed of squared timber, the faces of the old portion and the connection with the shore being built plumb, while the extension has a timber slope of 1 to 1 on the seaward side. The depth of water at the outer end at low water springs is 4 feet, and spring tides rise 4 feet.

The breakwater protects the eastern part of the cove from north and north-easterly winds, but during easterly and south-easterly ones it is entirely exposed to the force of the sea.

During the last fiscal year two fenders, a few planks and some ballast were replaced in the sloping face, as well as some ballast in the outer end of the work.

CASCUMPEC.

Cascumpec Harbour, Prince County, is situated on the north coast of the Island, about 17 miles to the southward of North Cape, and about 20 miles to the north-westward of the entrance into Richmond Bay. The town of Alberton, the second one in importance in the county, is located at the head of the harbour, and is a station on the Prince Edward Island Railway which has a branch to the Railway wharf, where vessels can load and discharge.

A large amount of produce is shipped yearly from the wharves at Alberton, and the harbour being commodious and perfectly safe, with a depth of water sufficient to accommodate sea-going vessels, it is sought as a harbour of refuge during easterly gales, and as many as 100 fishing vessels, principally American, have been counted at one time.

The entrance into the harbour is obstructed by two bars; the outer one, composed of sand, lies about a mile from the entrance, and the inner "bar," which is composed of very soft sandstone, is between the beaches which form the entrance. The bars are about 1,000 feet in width, and carry a depth of 10 feet of water at low water springs, which rise 3 feet.

It is proposed to make a cut through the inner bar 100 feet in width, with a depth of 15 feet at low water, so as to admit of a larger class of vessels entering the harbour.

The work was commenced by the Department in 1885, by sub-marine blasting, and it has been continued every season since; but owing to the short time in which operations can be carried on successfully (about 4 months in the year), the softness of the material, which blasts badly and is reduced to very small fragments, and the exposure of the work to easterly storms, the work has not progressed as rapidly as was expected.

With the amount voted during the last fiscal year a cut 150 feet in length, 25 feet wide, and to a depth of 15 feet at low water, has been made, the material blasted and removed amounting to 450 cubic yards.

The amount of material still to be removed to accomplish the cut as proposed is 10,800 cubic yards in place, or 15,100 cubic yards scow measurement.

CHARLOTTETOWN.

Charlottetown, the capital of the Province, is situated on a neck of land between the North and Hillsboro' Rivers, in Queen's County.

Much dredging was done at the expense of the owners or lessees, with the view of obtaining deeper water, and consequently greater loading facilities at the wharves of the Steam Navigation Company, the wharf the property of the Connolly estate, Messrs. Peake, Bros. & Co.'s wharf, and the wharf belonging to the Prince Edward Island Railway, the whole being situated in the harbour of Charlottetown.

GEORGETOWN PIER.

Georgetown, the shire town of King's County, is situated on the western side of the Montague River, near the entrance into Cardigan Bay, and is one of the termini of the P.E.I. Railway. Its harbour is well known as being one of the best and safest in the island.

The public wharf, known as the Queen's Pier, was constructed by the Local Government between 1873 and 1882, and was handed over to the Dominion Government in 1884. It is composed of a shore abutment 340 feet in length, and of six blocks from 25 to 33 feet long, with intervening spaces. Its total length is 642 feet and its width varies from 25 to 33 feet.

During 1884-85 the Department close-piled the outer faces of the blocks and the end, and in the year 1886-87 the outer end of the eastern side of the shore abutment, for a distance of 60 feet, was partially re-built, and all the spans received new planking.

During the last fiscal year some of the close-piling was re-fastened, three mooring posts were put in, the cap timbers, where necessary, were renewed, and the filling in the blocks and shore abutment, which had settled, was raised to the level of the planking on the spans, with brush, stone and gravel.

At the end of the pier there is a depth of 12 feet at low water springs, and low water mark extend to within 350 feet of the outer end. Spring tides rise 5 feet, and the class of vessels loading and discharging at the pier are large-size schooners drawing up to 10 feet of water.

HICKEY'S PIER.

Hickey's Pier, Queen's County, is situated on the south-eastern side of the Hillsboro' River, about 10 miles distant from the city of Charlottetown, and about 5 miles from Pisquid station of the P.E.I. Railway.

The Hillsboro' River being navigable about 15 miles above Charlottetown, is the most important on the island, and Hickey's Pier, since the channel at its end and berths on each side were dredged by the Department, is the first in importance on the river.

A large amount of produce is annually shipped from the pier, and considerable lumber and coal are imported, the trade being carried on by the schooners. During the season a steamer from Charlottetown calls at this pier three times a week.

The structure is 428 feet in length, and of width ranging from 22 to 29 feet, the latter width extending inwards from the outer end for 180 feet.

During 1884-85 the shore abutment was levelled up over a distance of 120 feet with stone and clay, thence for a distance of 145 feet the top was stripped and new floor stringers, planking, cap and fenders were placed, thence for 60 feet the work was newly planked, and on the outer block the defective planking was renewed.

During 1887-88 part of the covering on the outer block was renewed, fifteen piles were driven around it and a new landing slip built in its outer face; the shore abutment for a distance of 90 feet was re-built and re-filled with brush, stone and clay.

During the last fiscal year the narrow block built along the eastern face of the outer end, which was in danger of tumbling into the dredged channel, was renewed and replaced by a new block, its top extending over the old main blocks, and new floor-stringers and planking were placed upon the spans and the outer block.

The depth of water at low water springs, at the end and for a distance of 113 feet on each side of it, is $4\frac{1}{2}$ feet, and as spring tides rise $9\frac{1}{2}$ feet, that depth increases to 14 feet at that time of tide.

LEWIS POINT PIER.

This pier is in King's County, and is situated on the northern side of Cardigan River, a short distance below Cardigan Bridge, the head of navigation for vessels on the river, and about eight miles from its entrance into Cardigan Bay. Cardigan Station, on the P. E. I. Railway, is about half a mile from the pier.

The imports consist principally of lumber and coal, and the exports of potatoes and oats, and the trade is carried on by middling-sized schooners.

This pier is 575 feet in length, and is composed of a shore abutment 365 feet, of two blocks each 35 feet, and of an outer block 79 feet in length, with intervening spaces, each about 20 feet wide, out to the outer block, which is 33 feet wide. The outer end stands in 7 feet of water at low water springs, which rise here 5 feet, and the beach at low water dries out to within 140 feet of the end.

In 1884-85 a small amount was expended in making it fit for traffic.

During the last season the flooring and floor stringers were renewed, and new caps were placed where necessary, and the roadway on the shore abutment and on the blocks was levelled up with brush and stone.

MALPEQUE.

Malpeque Harbour, Prince County, lies within the eastern entrance of Richmond Bay, on the north shore of the Island, about 90 miles from East Point and 40 miles from North Cape.

During 1877-78-79 a breakwater, 600 feet long, having 18 feet at its outer end at low water springs, was built by the Department on the western end of the "Royalty Sands," on the eastern side of the harbour, to shelter the anchorage from north-east winds, which throw a heavy sea through the eastern channel, and to afford a shipping place for the produce of the surrounding country.

The tides in Richmond Bay are very irregular, being controlled by the winds, easterly winds causing higher tides and westerly winds producing a contrary effect. In perfectly calm weather spring tides rise 3 feet, neap tides 2 feet.

Owing to the construction of the breakwater, the sands inside of the breakwater wasted away with the action of tides during easterly storms, and to prevent this wasting a breast-work, 450 feet in length, was constructed from the inner end of the breakwater running towards Royalty Point.

During 1882-83, as the wasting away of the sands between the inner end of the breast-work and the "Point" continued, the breast-work was continued inwardly to the "Point," a distance of 1,920 feet.

On the 15th of December, 1889, the work was visited by a heavy north-east gale, accompanied by an unusually high tide, and the breakwater, as well as the breast-work, were seriously damaged, and during the last fiscal year the damage done was made good.

NORTH CARDIGAN.

North Cardigan Pier, King's County, is situated on the north side of the Cardigan River, near its entrance into the bay of the same name, and is distant about 6 miles from Cardigan Bridge, the head of navigation and a station on the P. E. I. Railway.

The pier is used for the shipment of produce, and was constructed by the Local Government many years ago for the benefit of a large agricultural district. Its total length is 383 feet, and it consists of a shore abutment and seven blocks, with intervening openings, the latter being spanned over and planked. It is from 23 to 25 feet wide out to the outer block, which has a width of 32 feet. The abutment is 100 feet in length, the blocks from 19 to 25 feet, and the spans from 14 to 26 feet long. The abutment and all the blocks are constructed of squared timber faces, filled in with brush, stone and clay, excepting the two outer blocks, which, as well as all the spans, are planked over.

The depth of water at the outer end is 5 feet at low water springs, increasing to 7 feet at a distance of 10 feet from the outer face. Spring tides rise 5 feet, neaps 3 feet, and the mud flats dry out to within 170 feet of the outer end.

On its assumption by the Dominion Government during 1884-85 the two outer blocks of the pier were close-piled, and during 1885-86 the flooring on the outer block was renewed and the top of the inner blocks and shore abutment were levelled up with brush and stone.

During the last fiscal year all the span-beams, the flooring (excepting on the outer block) and the cap were renewed, and the shore abutment, as well as the inside blocks, were levelled up with brush, stone and clay.

NORTH RUSTICO.

Rustico, Queen's County, is the most important fishing station on the northern coast of the Island, and is nearly equi-distant from the North and East Points, and about 9 miles from Hunter River Station, on the P. E. I. Railway.

The harbour is of good size and well sheltered, but the entrance is rendered difficult by a bar of sand overlying clay, the channel through which shifts frequently, and in which the depth was not more than 6 feet at low water, and sometimes after a long duration of north-east winds even less. The depth inside the entrance is 10 feet at low water springs, which rise here 3 feet.

Between 1881 and 1884 the Department constructed two breakwaters on each side of the entrance, that on the north side being 1,240 feet in length and on the south side 450 feet, for the purpose of concentrating the ebb current upon the bar, in order to scour away the sand and obtain a greater depth of water over it. The results have been most satisfactory, and the depth on the bar has been increased from 3 to 4 feet, which, added to the former depth, gives at low water springs from 9 to 10 feet.

In 1886-87 repairs were made on the sloping face of the north breakwater, and at the outer end a number of piles were replaced.

During the last fiscal year 17 feet of the outer end of the north breakwater, which was in a wrecked condition, was cut away, the new end was close-piled, the top re-ballasted and other work executed.

PINETTE.

Pinette Harbour, Queen's County, is on the north side of Northumberland Strait, 4 miles east of Point Prim and 12 miles north of Wood Island. It is situated at the mouth of Pinette River, and extends about $2\frac{1}{2}$ miles inland to Pinette Bridge, the navigable channel being from 200 at the upper end, to 600 feet wide at the lower end, and carrying a depth of water of 3 fathoms at low water springs.

A pier 120 feet in length and 28 feet wide was built on the south side of the channel, below and at right angles to Pinette Bridge, by the Local Government, and connected with the bridge by a span, planked over.

The pier is built along the channel, and has a frontage of 148 feet. During 1881 the dredge "Prince Edward" operated here in deepening the loading berths off the face of the pier, to 8 feet below low water springs.

During 1887-88 the Department raised the channel face of the pier about 12 inches, and made other improvements on the structure.

During the last fiscal year the approach was renewed by placing a new bent underneath and placing additional span beams and new flooring.

POWNAI PIER.

Pownal Pier, Queen's County, is situated on Pownal Bay, the north-eastern corner of Hillsboro' Bay, and is distant about 9 miles south-east from the city of Charlottetown, the nearest railway station to the pier.

The pier, which is at the head of the bay, is 753 feet in length, extends out to low water, and was constructed during the years from 1873 to 1882 by the Local Government.

To admit of boats and small craft coming to and leaving the pier at all times of the tide, the Department during 1880-81 dredged a channel up to the pier, 1,275 feet in length, 56 feet wide and from 5 to 6 feet in depth, carrying a depth of from 6 to 9 feet at low water springs, and a basin on the eastern side of the pier 90 feet wide and 250 feet in length.

During 1884-85 such repairs as were absolutely necessary to place the pier in a fit condition for shipping purposes were effected by the Department, and during the past season the span-beams were renewed, nine of the spans replanked and other necessary repairs effected.

RED POINT.

Red Point Wharf, Lot 48, Queen's County, is situated on the southern shore of the East River, about 5 miles above Charlottetown.

The water in front of the wharf was deepened to 12 feet at low water, to enable vessels to approach and load at the wharf.

SOURIS.

Souris Harbour, Colville Bay, King's County, is about 16 miles to the westward of East Point. It is the principal place of shipment at the eastern end of the Island, and is the terminus of the P. E. I. Railway.

SOUTH RUSTICO.

South Rustico Pier, Queen's County, is situated immediately below the Oyster Bed Bridge, at the mouth of Whatley River, which enters Rustico Bay at its southern end. It is distant about 6 miles from Hunter River station, on the Prince Edward Island Railway, and about 13 miles to the northward of the city of Charlottetown.

The pier was constructed by the Local Government between 1873 and 1876, to accommodate the shipping of produce from and the imports of coal and lumber to the locality. It is 593 feet in length, and consists of an approach 450 feet long and $17\frac{1}{2}$ feet in width, and of three detached blocks, about 25 feet apart. The inner block is 17 feet wide and $23\frac{1}{2}$ feet long; the two outer blocks are respectively 29 and 30 feet wide and 20 and 24 feet in length.

At the outer end there is a depth of 6 feet at low water springs, increasing to 10 feet at high water, and the flat dries out at low water to within 340 feet of the outer end.

In 1884-85 the top of the blocks and the approach were levelled up with clay, and portions of the flooring renewed and some fenders replaced.

During the fiscal year ended 30th June, 1889, the outer end was raised and other repairs executed.

During 1875-76-77 the Dominion Government constructed an extension of 896 feet, having a width of 46 feet, to the breakwater built some years previously by the Local Government, on the eastern side of the harbour and off Knight's Point, and raised the old work about 2 feet over its entire length (280 feet) to the level of the new, which was assumed to be 5 feet above high water springs. Spring tides rise $4\frac{1}{2}$ feet, neaps 3 feet.

During a heavy gale on the 5th of January, 1878, the outer end of the breakwater was carried away to a depth of 10 feet, and in 1878 the work of reconstruction was proceeded with and completed in September, 1880.

During 1880-81 the seaward side of the top of the end of the old breakwater was covered with 6-inch plank.

In 1881-82 a small amount was expended in necessary repairs to the inner end of the original portion of the work.

The sum of \$939.55 was expended in 1883-84 on general repairs and securing a breach in the outer face of the inner portion.

Close-piling the seaward face to protect weakened portions, re-ballasting and renewing floor stringers and planking, where necessary, was carried on during 1885-86.

During 1886-87 the inner end of the work, for a distance of 800 feet, was fully ballasted, and new floor stringers, flooring and cap-timbers placed where necessary.

The centre section for a distance of 290 feet, was raised 2 feet, fully ballasted and new floor stringers, flooring and cap placed; the whole of the seaward face which had not been previously close-piled was attended to, and the inner face, for a distance of 600 feet, was protected by additional fender piles.

During 1888-89 the sum of \$5,000 was expended on the outer section of the breakwater, which was constructed during 1878-79. The end stands in 24 feet of water at low water springs, and being rather narrow for its height (21 feet wide on top and 30 feet high) the top was moved some 3 feet inwards by the force of the sea. The work also suffered terribly from the attacks of the teredo, and to protect its weakened seaward face and to prevent the top from further moving, a heavy stone slope along its seaward face was commenced. A strongly constructed timber block, 30 feet square, was placed at the outer end of the seaward face, to prevent the stone from moving around the end, and the base of the block was close-piled.

NOTE.

The paragraphs on page 61, down to "STURGEON," have been misplaced, and refer to "SOURIS."

TIGNISH.

Tignish Harbour, Prince County, is situated on the north coast of the Island, about 6 miles southwardly from North Cape, and is really the mouth of the Big Tignish River.

As the coast in the vicinity of the mouth of the river is straight and has no protection from projecting head lands, gales from the north-east to south-east cause an unbroken sea to run in, and as the bottom is composed of shifting sand, the entrance was at times completely blocked up, until broken through again by the force of the water inside.

The construction of a breakwater on either side of the mouth of the river to contract the channel and increase the velocity of the current was begun by the Provincial Government in 1868, and up to 1875, when the Island entered into Con-

federation, the amount of \$8,149.56 had been expended. The north breakwater was built 830 feet in length and 21 feet in width, and that on the southern side 300 feet in length and 20 feet in width, with an opening of 45 feet between them.

During 1875-76 the Department re-constructed the top of the north breakwater, which was badly wrecked, to a height of 5 feet above high water springs, and built a new block at the outer end 40 feet in length by 41 feet in width.

In 1877-78 the south breakwater was raised and repaired; and the end of the north breakwater having been undermined by the action of the sea, was raised to its original level during 1879-80.

In November, 1879, the north breakwater was again damaged, and during 1880-81 the block at its outer end was close-piled and the south breakwater repaired and its outer end close-piled.

During 1881-82 portions of the north breakwater were rebuilt and repaired, and a brush, pile and stone breast-work was constructed on the beach to the northward of the breakwater; a similar breast-work, 150 feet in length, was constructed on the south beach, and the corner formed between the north breakwater and the block at its end, for a distance of 100 feet along the face, was filled with brush and stone.

As it appeared that the breastwork constructed on the north side of the harbour did not extend sufficiently far to prevent the sea from cutting through the beach it was extended during 1884-85-86, a distance of 1,875 feet to the high land; at the same time the seaward face of the north breakwater, over a length of 540 feet, was protected by a brush and stone slope.

During 1886-87 the dredge "Prince Edward" operated in deepening between the breakwaters and in the basin inside.

During the last fiscal year some planks and close-piling on the outer block of the northern breakwater were replaced, and a quantity of brush and stone placed at points of the breast-work where required; and the piling at the inner end of the south breakwater was protected by a brush and stone backing.

Prior to the commencement of improvements at the mouth of the Tignish River, there was only a depth of 1 foot at low water, and only such boats as could be hauled upon the beach could enter. Since the completion of the works the depth, which depends to some extent on the prevalence of easterly winds, has never been less than 5 feet during low water springs, and is generally more. Spring tides rise 3 feet, neaps 2 feet.

NOVA SCOTIA.

ARISAIG.

Arisaig, Antigonish County, is on the south-east shore of Northumberland Strait, 15 miles east of Merigomish, the nearest harbour.

The pier at this place was commenced by the Government of Nova Scotia about forty-six years ago, and came under the charge of the Federal Government in 1870. It was put in thorough repair in 1873, and small amounts were expended in 1880 and 1881 in repairing damage caused by ice.

In 1886 a contract was entered into for repairs to the pier and for the construction of a breakwater on the eastern side of the harbour to arrest the travel of sand from the south-west. The works under contract were completed in October, 1888.

The pier is 440 feet in length; the outer portion, 195 feet in length, is from 40 to 44 feet wide. The depth at the outer end was originally 8 feet at extreme low water; there is now at extreme low water a depth of 1 foot along the inner face, over a distance of 100 feet from the outer end, and over the sheltered area nowhere more than 3 feet.

The breakwater is 300 feet in length and 20 feet in width on top, and has an L at the outer end 40 feet in length. It is constructed of square timber, close-faced, and is full ballasted and protected at the outer end by close fendering. The depth at the outer end at extreme low water is 6 feet. Spring tides rise 5 feet.

During the year (1888-89) a contract was entered into for extending the pier 100 feet, and for protecting its seaward face by a deposit of heavy stone; but up to its close no work except in the way of procuring material had been done.

BARRINGTON.

Barrington is situated at the south-western end of Shelburne County, and is about midway between the towns of Yarmouth and Shelburne, being 45 miles to the south-west of the latter. The settlement is a straggling one, and consists of Barrington Head and Barrington "Passage," the two covering a distance of about 3 miles. Considerable trade is done in supplying the fishermen of the neighbouring district, and the "Passage" being a place of call for the line of steamers running between Yarmouth and Halifax, a good deal of freight is transhipped for the immediate neighbourhood and Cape Sable Island.

At present there is but one wharf at which steamers can land, and this is not available at low water owing to a bar about 1,200 feet from the wharf, on which there is only 4 feet of water, at low tide and 13 feet at high water springs. As the dredging of a channel through the bar would be expensive, and as it was doubtful if the channel would remain open, on account of its being at right angles to the current and set of the tide round Cape Sable Island, an examination was made in 1888 of the different sites in the neighbourhood, to ascertain which was most suitable for the construction of a public wharf, and one was selected near the head of Sherrows Channel.

This channel enters the main channel immediately to the eastward of the bar, and lies between Sherrows Island and the mainland. The flats on either side are just bare at low water, at which time there is 12 feet of water in the channel itself. Spring tides at Barrington rise 9 feet. The site is on the western side of the channel, at a point where it most nearly approaches the mainland, and the situation is land-locked, and has long been used as a safe and convenient place to winter fishing vessels and coasters.

To reach the deep water of the channel it is necessary to cross 960 feet of flats, and it is proposed to carry the wharf across this on pile bents, the first 120 feet of the work being built of crib-work, on account of the rocky bottom. The wharf over the flats will be 20 feet wide, and the pile bents, of five piles each, placed at 15 feet centres. At the edge of the channel an "L" of crib wharfing, 30 feet wide and 60 feet long, is to be built for steamers and vessels to lie at.

During the fiscal year the sum of \$3,000 was expended towards the construction of this work; the inshore section was built partly of stone, owing to the high price of timber in the neighbourhood, the remainder being of crib-work, as was originally intended, and sufficient piles, square timber, planking, &c., was purchased to construct about 600 feet of the work. It is estimated that the structure, when completed, will cost \$6,800.

BATTY ISLAND.

Batty Island, Pictou County, is situated in Merigomish Harbour, near the entrance. Its length is $1\frac{1}{2}$ miles and its greatest width half a mile, and its southern shore is distant from the mainland about three-quarters of a mile, and is sheltered from all outside winds.

During the year a small wharf was constructed on the south side of the Island. It extends 60 feet to flats covered with only a few inches at extreme low water, is 12 feet in width, and consists of two blocks, each 15 feet by 12 feet, with openings of 15 feet. Spring tides rise 5 feet 3 inches; neaps rise 3 feet 3 inches.

BAYFIELD.

Bayfield, Antigonish County, is on the south coast of St. George's Bay, 3 miles east from Antigonish Harbour, and 15 miles west from the entrance of the Strait of Canso. The harbour is formed by Pomquet Island and outlying reefs.

Bayfield wharf, on the western side of the harbour, a quarter of a mile south from the breakwater, was commenced by a joint stock company about thirty-two years ago, was handed over to the Government of Nova Scotia and completed about sixteen years ago, and came under the charge of the Federal Government in 1887. It is 402 feet in length, 22 feet wide over a distance of 134 feet from the end, 30 feet over a further distance of $193\frac{1}{2}$ feet, and 50 feet over the remaining $24\frac{1}{2}$ feet. The depth at the outer end at extreme low water is 9 feet. Spring tides rise 4 feet, neaps rise 2 feet.

In November, 1887, a contract was entered into for repairing, raising and close-piling the two outer blocks, cutting down the central and shore blocks, and for the construction of a new work between the outer blocks and the shore. The work was completed in November, 1888.

In 1879 a breakwater was built, extending 400 feet from Pomquet Point. A contract entered into in 1886 for the construction of an additional length of 300 feet was completed in October, 1888.

Dredging was done around the sides and end of the wharf to a depth of 12 feet at low water, and in opening a basin inside of the "L" or return at the end of the wharf, the whole for the greater and better accommodation of vessels and the shipment of produce, &c.

BAY ST. LAWRENCE.

Bay St. Lawrence, Victoria County, is at the northern extremity of Cape Breton Island, between Capes North and St. Lawrence.

Near the head of the bay there is a small lake enclosed by a beach of sand and gravel.

In 1887 a channel was opened through the beach to admit of the passage of boats at high water. Shortly after its completion it was filled in from the outside, over a distance of about 100 feet, and during 1888-89 the channel, which had been alternately opened during freshets and closed during northerly gales, was re-opened and protected by a pier extending 53 feet beyond high water and by a work of brush and stone, 30 feet in length, inside of it.

The channel remained open for a while after the completion of the protection work, but is now closed by a short bar opposite the inner end of the pier.

This shoaling is due to the travel of sand and gravel across the beach, inside the protection work, during northerly gales.

Spring tides rise 4 feet.

BEAVER RIVER.

Beaver River, Yarmouth County, flows into the Bay of Fundy, near the mouth of St. Mary's Bay, and forms the dividing line between Yarmouth and Digby.

The river discharges through a gravelly beach, which frequently, when the stream is low, obstructs the mouth, and of late years the river has been completely closed, the water finding an exit through the gravel.

In the year 1886-87 operations were begun by the Department to improve the river mouth and remedy this defect. A passage was cut through the gravel bank and sea wall, and a short breakwater was built on the southern side to catch the gravel and prevent the bank reforming.

This work proved very satisfactory, and during the last fiscal year an additional sum of \$1,500 was used for further improvements. These consist of extending the breakwater 100 feet, sheet-piling the northern face of the same, which was exposed to the action of the river and was in danger of being undermined, and extending the short pier on the northern side of the mouth, it being found that storms from the north made it difficult for fishing boats to enter and at times threw in considerable gravel.

The breakwater, beside protecting the river mouth, forms a good though short loading pier for small vessels during the summer months, and the pond inside the sea wall a convenient boat harbour for fishermen.

BIG BRAS D'OR.

Big Bras d'Or, Victoria County, is on the south side of the channel of the same name, near its entrance to the Atlantic Ocean.

During the year (1888-89) the unexpended balance of the amount appropriated for the year 1887-88 was expended in completing a wharf 160 feet in length and 20 feet in width, with an "L" 40 feet by 20 feet. It is strongly constructed of round timber in blocks, with openings of 17 feet 6 inches, and is well ballasted and protected at the outer end by close-piling. The depth at the outer end, at extreme low water, is 11 feet.

Spring tides rise 2 feet.

BIG POND.

Big Pond, Cape Breton County, is on the south side of the East Bay of the Great Bras d'Or Lake, 13 miles from the head of the bay.

During the year the unexpended balance of the amount appropriated for the previous year was expended in completing a wharf 260 feet in length and 20 feet wide, with a depth at the outer end of 8 feet at lowest water level.

BLUE ROCK.

Blue Rock, Antigonish County, is on the south coast of St. George's Bay, 2½ miles east from Tracadie Harbour.

A contract entered into in November, 1886, for the construction of a breakwater 326½ feet in length, to extend in a south-westerly direction from Blue Cape, was completed in October, 1888.

The breakwater is 16 feet wide on the top; on the seaward side it has a face sloping 1 to 1, from the top to 1 foot below extreme high water, the outer end and seaward side below the sloping face are built to a batter of 1 in 6. The inner side has a batter of 1 in 12. It is strongly constructed, with faces of squared timber, is full ballasted and is protected at the outer end and along the inner face for a length of 30 feet by close-fendering. The work is dry at extreme low water 60 feet from the shore end. The depth at the outer end at extreme low water is 12 feet, and over the area sheltered from the north and east from 12 to 5 feet.

Spring tides rise 4 feet.

BROAD COVE.

Broad Cove Marsh, Inverness County, is on the Gulf of St. Lawrence, 12 miles south from Margaree.

A contract entered into in November, 1886, for the construction of a wharf at this place, was completed in December, 1888.

The wharf is 400 feet in length and 25 feet in width on top. It is strongly constructed, with faces of squared timber, and is full ballasted and protected at the outer end by close-fendering. The depth at extreme low water at the outer end is 12 feet 10 inches.

Spring tides rise 4 feet 8 inches.

BRULÉ.

Brulé is situated on the south side of Brulé Harbour, Northumberland Strait, in the extreme north-east corner of Colchester County, nearly midway between River John and Tatamagouche, and distant about one mile from the railroad being built between Oxford and New Glasgow.

The construction of the wharf was begun about 25 years ago, and was completed to its present dimensions by private subscriptions and grants from the Local Governments of Nova Scotia and Prince Edward Island, at a total cost of \$2,500. It is 404 feet in length, with an average width of 24 feet, and is built entirely of round hemlock timber. For a distance of 300 feet from the inner end the top of the wharf is gravelled; the outer 104 feet are planked over. The work is 13 feet high at

the outer end, and the depth of water at the same place at low water springs is 3 feet, and as spring tides rise 7 feet the depth at high water springs increases to 10 feet. The beach dries out to about 100 feet from the end at low water.

The trade from the wharf consists principally of hemlock bark, lumber, hay and potatoes, and the vessels employed in the trade are small schooners, not over 300 tons burthen.

During 1886-87 an amount of \$500 was expended by the Department in levelling off the top and in ballasting.

During the last fiscal year a further sum of \$550 was expended in general repairs to the structure.

The work is not much exposed, and although weakened by age is at present in a fair state of repair.

CRANBERRY HEAD.

Cranberry Head, now Sanford, is 6 miles north of Yarmouth. It is quite an important fishing station, and the breakwater is used entirely for the protection of small vessels and fishing boats. Besides net and line fishing, two three, and sometimes as many as four large fishing traps are worked from this breakwater. These traps represent considerable capital and employ a number of men, most of whom own shares in the traps.

The breakwater was begun about the year 1858 by the local authorities, and different expenditures were made by them until the year 1865. In 1876 the first expenditure was made by the Department, and the sum of \$2,000 was used in extending the structure 150 feet. In 1878-79 a further sum of \$1,000 was expended in constructing an additional length of 50 feet and in repairing the older portions. During August, 1879, the work was damaged by storm, and \$500 was employed in making necessary repairs, and in 1883-84 the outer end and part of the seaward face was sheathed. In 1886-87 it was found that the gravel was working round the outer end of the pier and destroying the harbour, and a spur 28 feet long was built at right angles to the seaward face near its outer end to arrest it. In 1887-88 some small repairs were made to the sheathing, which had become worn through by the action of the gravel, and during the past fiscal year the sum of \$200 was expended in removing the gravel from the dock where it had collected previous to the spur being built.

The structure is comparatively short on the seaward side, owing to the large amount of gravel collected there, only 300 feet of it being exposed above the beach, while the inside or dock face is 470 feet long. The outer end of the pier for a length of 232 feet is 23 feet wide, the remainder, or inshore end, having a width of 19 feet. The wider portion of the work is fitted with a break 3 feet high and the seaward face is sheathed with flatted spars from 6 to 8 inches thick.

Spring tides rise at this place 16 feet, and the breakwater extends to within a short distance of low water mark, there being from 13 to 15 feet of water at its outer end according to the different stages or heights of the gravel.

CHETICAMP.

Cheticamp Harbour, Inverness County, is on the west coast of Cape Breton Island, 18 miles north from Margaree Harbour.

A contract was entered into 10th June, 1889, for the construction of a wharf on the eastern side of the harbour, to consist of an approach 125 feet in length and 30 feet in width over a distance of 60 feet from its outer end, with end and side walls of stone and centre filling of earth or stone; and an extension, 80 feet in length, in two blocks, with openings of 17 feet 6 inches. The outer block is to be 60 feet in length along the channel face, and is to have a depth of 4 feet at extreme low water.

Spring tides rise $3\frac{1}{2}$ feet.

COW BAY.

Cow Bay, Cape Breton County, is on the eastern coast of Cape Breton Island, about 18 miles south-east of Sydney Harbour. Owing to the extensive coal mines in its vicinity it is a place of considerable importance.

The bay is two and a half miles wide at its mouth, and being completely open to the Atlantic Ocean affords no safe anchorage during easterly winds.

A breakwater was built on the north side of the Bay by Messrs. Archibald & Co., proprietors of the Gowie mines, with some aid from the Government of Nova Scotia. It is 1,386 feet in length, and was originally about 44 feet in width, with a depth at outer end at low water of 20 feet. The area of the basin enclosed between it and the loading pier of the Gowie mines is about 17 acres, 10 acres of which had a depth of from 9 to 20 feet at low water. Spring tides rise 5 feet.

In 1873, while repairs were in progress by the Department, the breakwater was seriously damaged by the great gale of August 24th. After the gale operations were resumed, the balance of the amount appropriated being largely supplemented by Messrs. Archibald & Co.

In 1874 Messrs. Archibald & Co.'s interest in the breakwater was acquired by the Federal Government. A contract entered into in May, 1875, for repairing and strengthening the structure, was completed in July, 1877. Extensive repairs have been made nearly every year since 1877, and the work has been strengthened by the addition of counter forts and outer face works and by close-piling.

During the last fiscal year very extensive repairs were made to those parts of the breakwater which had been damaged by storms and weakened by decay, and owing to its exposed position the breakwater is always liable to be damaged by easterly gales.

DELAP'S COVE.

Delap's Cove, Annapolis County, is situated on the south shore of the Bay of Fundy, and is about 12 miles to the eastward of Digby Gut.

The breakwater is constructed immediately to the eastward of the mouth of a small pond which affords safe shelter for fishing boats and a convenient place for keeping small vessels during the stormy winter months. The breakwater itself affords a good loading place for coasters and small schooners, the pier breaking off all easterly storms, the formation of the coast on the opposite side of the stream forming a natural western breakwater.

This breakwater was built by the Department in 1878-79 at a cost of \$2,150. It is 156 feet long and 25 feet 3 inches wide, and is constructed of round timber, with square timber faces, its easterly side being sheathed with 8 inch timber. It is provided with a "break" 4 feet 6 inches high along its seaward (easterly) side, and its covering is of 6-inch material.

In 1885 the sum of \$50 was expended in repairing the foundation of the seaward face and depositing large stone along it, to prevent the gravel from washing away. The whole pier is in good order and is in need of no immediate repairs.

During the past year the sum of \$1,000 was expended in protecting the entrance to the pond and in placing an anchor and buoy off the outer end of the pier to enable vessels to warp out and proceed to sea, and avoid the danger of going ashore on the western headland to which they were formerly exposed.

The opening into the pond was protected by extending the western face of the pier inwards 100 feet, along the face of the stream, or to where this latter opens out into the pond, and in raising the beach on the seaward side of the pier and preventing the stone and gravel from being thrown over the sea wall. The wharfing along the stream is of an average height of about 16 feet and 12 feet wide, and the entrance to the pond is now clear and unobstructed.

The warping anchor is a large rock, placed in position and fitted with proper chains and shackles, and during the summer months has a spar buoy attached. This latter is removed in winter, to avoid danger of drifting ice.

[1889]

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DIGBY.

The town of Digby is situated at the western end of Annapolis Basin, and is the eastern terminus of the Western Counties Railway. It is a port of call for steamers running between Annapolis, St. John and Boston, and does a considerable coasting trade, principally in the transshipment of fish. The harbour is open at all seasons, and the pier which stands at the northern end of the town acts as a break-water to the smaller wharves, and is the only wharf in the place accessible at low water. The outer end of the pier was destroyed by storm in December, 1885, and prior to this consisted of an inshore section of pile-work 560 feet long and 37 feet wide; then a block of close-faced timber, 80 x 40 feet; next a cribwork inclined landing, 170 feet long, over the top of which there was a deck wharfing carried on pile bents; lastly, a close-faced timber block 50 feet by 45 feet, which formed the outer end of the pier. A channel was also dredged along the southern side of the pier, from the head of the inclined landing past the outer block and into the deeper water beyond.

The storm referred to moved the outer block bodily into the dredged channel and destroyed the outer end of the pier, as far back as the head of the inclined landing.

After the destruction of the outer end of the pier the passing steamers effected a landing and loaded and discharged their freight by means of a scow and tug boat, and as the detached block was very much in the way an attempt was made in 1887, by the Department, to remove it by day's labor. This was not successful, and in 1888 a contract was entered into for its removal. The contractor after much difficulty tore the block to pieces and removed it down to the surface of the mud.

In January, 1888, operations were begun towards rebuilding the pier to its original length, and work was continued until the 1st November last, at an expenditure of \$8,863.01, of which sum \$2,470.62 has been expended since the beginning of the fiscal year.

The new work consists of a block 45 feet by 45 feet, to replace the former one. This block is built of round timber, with double sets of face logs, and is full ballasted; it is 45 feet high, and is connected with the older portions of the pier by a cribwork inclined landing, over the top of which a deck wharf is carried on heavy framed bents. The inclined landing and its superstructure is 25 feet wide. Besides the above, the inshore or pilework section was strengthened and repaired in places, and parts of the worn and decayed plank covering were renewed.

The inshore end of the pier is very old and decayed, and though now in serviceable condition, is liable to damage from storms, many of the piles being eaten off by worms, and the block at the head of the inclined landing much twisted from its original position by the storm of 1885.

Spring tides rise 27 feet 6 inches, and leave the beach bare to the head of the landing. There is now 12 feet of water at low tide at the end of the pier.

EAST BAY.

East Bay, Cape Breton County, is an arm of the Great Bras d'Or Lake.

In 1881 a wharf was built at the head of the bay by the people, aided by a small grant from the Provincial Government. It was originally 160 feet in length, and in 1882-83 a block 70 feet by 18 feet was built at the outer end. In 1883-84 the inshore or original portion was placed in a thorough state of repair.

During the year 1888-89 the covering of the outer block was repaired, new fenders replaced and two of the shore or central blocks were rebuilt and other repairs executed. There is a depth at the outer end of 11 feet at lowest lake level.

One of the steamers of the Bras d'Or Steam Navigation Company make daily trips between East Bay and Port Mulgrave during the summer.

EATONVILLE.

Eatonville Harbour, formerly known as "The Three Sisters," Cumberland County, is about 10 miles north of Cape Chignecto, Bay of Fundy, and 4 miles south-west from Apple River Harbour.

The harbour is formed by a sand beach at its mouth, which extends from the south side to within about 120 feet of the rocky cliff on the north side. Between the end of the beach and the cliff flows the stream, and the tide which runs inland about half a mile, covers, at high water, a large expanse of flats composed of marsh mud.

Large vessels up to 1,200 tons can run into the harbour at high water, where they load lumber for the English market, or where they undergo necessary repairs.

Spring tides rise 37 feet, neaps rise 30 feet.

During 1887-88 a breakwater was constructed by the Department at a cost of \$2,000 off the northern end of the sand beach, to prevent the accumulation of gravel in the mouth of the river and to protect the end of the beach, as during freshets the end of the latter was often damaged, and during the season when there are no freshets the mouth of the river was filling up with gravel thrown in by the sea, making it difficult for vessels to enter or leave the harbour. The work constructed was 123 feet in length and 20 feet wide on top, sloping 1 in 4 at the end and 1 in 8 on the sides, it was built of round timber cribwork, thoroughly put together and well ballasted. Its average height was 17 feet.

On the 11th August, 1880, instructions were given to extend the breakwater a further length of 80 feet. Work was commenced upon it at once, and after the bottom was placed and close-piled around, the work was visited by a very heavy gale, which cut away the gravel bank at the inner end of the breakwater and undermined it. Work was stopped on the extension, and all the energies were bent upon securing the inner end of the breakwater by the construction of protection works. The work was secured for the winter, and it has passed through very severe storms since without further damage. The beach dries out about 100 feet beyond the end of the unfinished work during low water springs.

GABARUS AND BELFRY LAKES.

Gabarus and Belfry Lakes, in Cape Breton County, a few miles south from Gabarus Bay, are connected by a stillwater channel. Belfry Lake is connected with Fourchu Bay by a narrow and intricate channel.

During the year 1888-89 the channel between the two lakes was deepened to 2 feet at the lowest lake level over a distance of about 800 feet. The new channel is 20 feet in width.

GREEN COVE.

Green Cove, now called Port Maitland, Yarmouth County, is about 13 miles north of the town of Yarmouth, and is a thriving fishing village, from which considerable trap fishing is done and a large number of shore boats kept.

In 1878 the "Pond Company" transferred a certain portion of their property to the Crown, and the Department expended the sum of \$4,500 in extending the eastern breakwater 50 feet, and in raising and widening the inner end for a length of 158 feet and also constructing a spur 75 feet long on the western breakwater. In 1885-86 the outer end of the eastern pier was raised and the sheathing of the outer face of the western breakwater repaired.

During the early part of the winter of 1887-88 the western breakwater was seriously damaged by a succession of storms, and a breach of 86 feet was made directly through the work near the outer end.

In the first part of the past fiscal year the sum of \$500 was expended in protecting the work from further damage. This sum was used in clearing away the wreckage, closing up both sides of the breach, and in driving a number of fender piles along the outer faces and exposed corners of the broken work.

The breakwater is entirely dry at low water springs, and there is about 16 feet of water at the outer end at high tide, spring tides rising about 17 feet 6 inches at this place. Including the gap through the work, the breakwater is 386 feet long, and is from 20 to 22 feet wide.

GREEN HARBOUR.

Green Harbour, Shelburne County, is situated between the mouth of Jordan River and Ragged Island Harbour, and is about $2\frac{1}{2}$ miles to the north-west of Lockeport.

The harbour is only serviceable for small vessels, and being exposed to the southward a heavy sea at times comes in from the Atlantic, but on its eastern side there is a sheltered bay, in which some twenty fishermen keep their boats. This bay has a channel in its centre, in which there is from 4 to 6 feet of water at low tide; the rest of the bay is then dry, and consists of mud flats. On the western side of this bay, and protecting it from the open water of Green Harbour, there is a bar of gravel and stone.

During the fiscal year the sum of \$100 was expended in cutting a boat channel through the bar to enable the fishermen to reach their fishing grounds without the necessity of rowing their boats round the northern end. The channel was excavated by hand, and is available to boats from three-quarters flood to one-quarter ebb; it is 125 feet long, and sufficiently wide to enable the largest boats to pass through.

HAMPTON.

Hampton, or Chute's Cove, Annapolis County, is 25 miles east of Digby Gut, and is 6 miles north of Bridgetown, its nearest railway station.

The original pier at this place was built by the Provincial Government, and was about half a mile to the westward of the present structure. It was 165 feet in length and in 1879 the Department expended \$3,000 in extending the work 121 feet, in strengthening the older parts and in preventing the work from being undermined by the action of the sea.

In 1881 it was found that the original work had been so badly located that it would be impossible to make it of any practicable service, as it was not only being undermined on the seaward side but, owing to the direction of the pier the shingle was fast shoaling the water on the inside. It was therefore decided to remove the structure to its present site.

This was done at a cost of \$2,300, and such of the materials of the old structure as were sound and fit for the purpose were used in the new work. The present pier is 264 feet long, and is situated immediately to the westward of the mouth of a small stream. This latter washes away the sand.

In examining this work last year it was found that the stream had worked under the foundation and endangered the whole structure. To guard against this, during the past year the Department expended the sum of \$675 in close-piling the entire inner face, levelling up the top of the work, which had settled in places, putting in some additional ballast and effecting some general repairs to the covering and "break." The pier is now in good condition, and affords at high water a good safe loading berth for small schooners and coasters.

The trade is the same as that of other piers along this coast of the Bay of Fundy, viz., principally cordwood, fish and the shipment of apples, potatoes and other products of the North Mountain.

The range of tides is from 27 to 31 feet, and there is about 20 feet of water at the end of the pier at ordinary high water spring tides.

JONES' HARBOUR.

Jones' Harbour, Shelburne County, is a small harbour on the eastern side of the mouth of Sable River, and is distant 12 miles east of Lockeport by water. The harbour is small, but being land locked and having 12 feet of water in its channel, it is much used by shore fishermen in the fall, when the larger vessels have returned from the "Banks."

Owing to its position on the coast, there is a heavy run of tide in the harbour, and the fishermen have had difficulty in properly securing their boats.

During the fiscal year the Department expended the sum of \$50 in placing moorings in the harbour. These consist of two ring bolts in exposed rocks, and a heavy stone anchor, with chain swivel and buoy attached.

KINGSPORT.

Kingsport, formerly Oak Point, King's County, is situated on the western shore of the Basin of Minas, between the mouth of the Cornwallis River and Cape Blomidon, and it is the eastern terminus of a branch of the Windsor and Annapolis Railway now under construction.

The original pier was 445 feet in length, and was owned and controlled by a pier company, which transferred it to the Crown in 1873-74. A crib-work facing, 12 feet wide, was built along the eastern or exposed side, for the purpose of breaking the force of the sea.

In March, 1875, a contract was made for the extension of the pier 270 feet, with a width of 30 feet, in order to increase the area sheltered and afford earlier access to the harbour which, owing to the great range of tides (from 40 to 43 feet), is dry between half ebb and half flood, and was completed in November 1875.

In 1883-84 some slight repairs were made to the older work, and in 1885-86 the covering which had become old and worn in places was renewed.

During 1887, 107 feet of the damaged face work of the breakwater was rebuilt.

In the autumn of 1888 it was found that the covering of the pile work section was so decayed that it was impossible for the farmers to reach the outer part of the pier with their loaded teams, and a plank driveway, 12 feet wide over the pile section, was begun in November and completed during the early part of the winter.

LITTLE NARROWS.

Little Narrows, Victoria County, is a contraction of the St. Patrick's channel of the Great Bras d'Or Lake, at a point 7 miles to the eastward of the village of Whyecomagh.

A wharf was constructed on the south side of the Narrows in 1887-88. It consists of a shore block, 47 feet 6 inches in length and 20 feet in width, and of a pile extension 82 feet in length, with an "L" at the outer end 40 feet by 20 feet. The depth at the outer end is 14 feet. The level of the Lake is constant.

During the year (1888-89) the unexpended balance of the amount appropriated for the year 1887-88 was expended in the construction of a store house and in repairs to the slip.

The wharf is used by one of the steamers of the Bras d'Or Steam Navigation Company plying between Little Bras d'Or, Baddeck and Whyecomagh, and as a place of shipment for cattle and farm produce.

LISMORE.

Lismore, in Pictou County, is on the Northumberland Strait, 10 miles east from Merigomish, the nearest harbour, and the same distance east from French River, the nearest station on the eastern extension of the Intercolonial Railway. The residents are farmers and engage in fishing.

A wharf was commenced in 1886-87 and completed the following year. It is 200 feet in length and 20 feet wide, strongly constructed of squared timber, close-faced, and is full ballasted and protected at the outer end by close-fendering. The depth at the outer end at extreme low water is 1 foot 9 inches. Spring tides rise 4 feet 6 inches.

During the last fiscal year a small amount of blasting was done on the ledge, to give a greater depth of water.

LOWER HORTON.

Lower Horton, or Horton Landing is situated in the eastern end of King's County, N.S., at the mouth of the Gasperaux River, about midway between Avonport and Wolfville. It is a station on the Windsor and Annapolis Railway.

During the fiscal year 1888-89 the sum of \$2,252.28 was expended in rebuilding the loading wharf at this place; the former wharf which was built some sixty years ago, having become so decayed and dilapidated that it was useless for shipping purposes.

The new wharf is built upon the site of the old one, and is constructed of round timber open cribwork, with three ballast floors, pile-fenders, plank covering, &c. The work is 172 feet long, 65 feet wide at the outer end and 23 feet 6 inches wide at the inner.

The site is a safe and sheltered one, being within the mouth of the river, and though the work is dry at low water, owing to the great range of tide, vessels drawing 18 feet can reach it at high water.

MABOU.

Mabou Harbour, Inverness County, is on the west coast of Cape Breton, 6 miles north-east from Port Hood. Its entrance was formerly at the southern extremity of a range of sand hills by an intricate channel, obstructed by a bar over which there was a depth of only 4 feet at low water.

In 1870 a survey was made, and a report submitted on the project of opening a new channel through the sand hills at their northern extremity, and closing the existing channel.

The work was commenced in 1872. A pier on the south side of the new channel, 753 feet in length, which was completed in 1876, and the same year the old channel was closed. Expenditures have been made nearly every year since 1876 in constructing a brush and stone dam on the south side near the outer end of the pier, constructing and repairing a breast-work on the north side, repairing the pier and protecting it by close-piling, and since 1885 in constructing a work of brush and stone in shoal water on the north side of the channel, extending 1,112 feet beyond the outer end of the pier.

The amount appropriated for the year 1888-89 was expended in increasing the height of the brush and stonework.

The new channel is straight and is in every way a great improvement on the former entrance, which is now closed by a sand bar from 900 to 1,000 feet in width. The depth at low water, in the new channel opposite the outer end of the brush and stonework, is 7 feet; beyond this there is a short bar covered with 6 feet at low water. In the channel from the outer end of brush and stone work to the outer end of the pier the depth varies from 8 to 12 feet, and opposite the pier, where it is about 100 feet wide, from 12 to 15 feet at low water. From the inner end of the pier there is a channel 4,000 feet in length, expanding into a fine basin $2\frac{1}{2}$ miles long, and from one quarter to one-half a mile wide, inside the 10 foot line, and having a depth of from $2\frac{1}{2}$ to 4 fathoms over a large part of its area.

MAIN À DIEU.

Main à Dieu, Cape Breton County, is a small harbour on the eastern coast of Cape Breton Island, 10 miles north-east from Louisburg. It is sheltered by Scatarie Island and by reefs in the bay between it and the mainland, and affords a safe anchorage for small coasting and fishing vessels, by whom it is much frequented, in from 10 to 13 feet at low water. Spring tides rise $5\frac{1}{2}$ feet.

A breakwater, 250 feet in length, was built from a point on the eastern side of the harbour in 1881-82. It consists of a core of timber work, full ballasted and covered with stone, sloping on the seaward side and outer end 3 to 1 and on the inner side 2 to 1, over which there is a covering of heavy stone carefully placed.

During the year (1888-89) \$400 was expended in replacing some of the heavy stones of the inner slope, near the outer end of the breakwater, which had first been lifted out of place by ice and afterward carried away by the sea.

MARGARETVILLE.

Margaretville, Annapolis County, is on the southern shore of the Bay of Fundy, about 42 miles east of Digby Gut.

During the storm of 27th December, 1885, the pier at this place was seriously damaged, and a breach of 150 feet was made completely through the work.

At the Session of 1885-86 the sum of \$8,500 was voted to repair the pier, and during the last half of the year 1886 the destroyed portion was rebuilt, at a cost of \$4,419.92. In the spring of 1887 the repairs were continued, and the seaward face of the old work, which was much decayed and worm-eaten, was cut down and rebuilt. These repairs were in progress until the close of the season of 1887, when it was found that the sum appropriated was not sufficient to finish the work undertaken.

During the past year the additional sum of \$300 was used to complete the work of the previous season. This consisted of finishing the sheathing of outer face, adding 40 feet of new cap timber and three additional knees to the "break," completing the ballasting and covering, and removing some remaining old ballast from the dock or loading berth.

The structure is now in good order, and requires no further repairs or expenditure. It is 470 feet long and from 35 to 39 feet wide, and extends to within a short distance of low water mark. The tides range from 28 to 32 feet, and there is a depth of 27 feet at the end of the pier at high water springs.

MCNAIR'S COVE.

McNair's Cove, Antigonish County, is on the western shore of St. George's Bay, 5 miles south from Cape George.

In 1872-73 a breakwater was constructed, extending 400 feet from the northern point of the cove. Repairs were made from time to time, and in 1878 a block, 20 feet in length, was placed at the outer end. In 1879 the work was carried away by drift ice from the outer end to within 100 feet of the shore end down to from 6 to 3 feet below low water. During the summer of 1883, 70 feet of the shore end was rebuilt, and during the winter of 1884 the work was extended 94 feet. In April, 1884, the 94 feet extension was badly damaged by drift ice and subsequently carried away.

In 1887 a contract was entered into for the reconstruction of 160 feet of the breakwater, and the work was completed in December, 1888.

The new work is 34 feet wide on top and has a sloping face on the seaward side and outer end. It is strongly constructed, close-faced, full ballasted, and protected on the seaward side and outer end by close-piling.

The depth at extreme low water at the outer end of the new work is 11 feet, and at its inner end 5 feet. Spring tides rise 4 feet.

NOEL.

Noel Bay, Hants County, is situated on the southern side of Cobequid Bay, about 13 miles to the westward of the village of Maitland. It is the largest indentation on the southern side of the bay, being about a mile and a-half wide at its mouth and extending back from the general coast line about the same distance. The whole of the bay, with the exception of some small creek channels, is bare at low water. Spring tides rise 50 feet, neaps 43 feet.

To accommodate the large and prosperous agricultural community of this neighborhood, during the last fiscal year the Department constructed, at an expense of \$3,000, a landing wharf on the west side of the bay. The wharf, including the approach, is 275 feet in length and 25 feet wide with an "L" at the outer end 35 feet long. The approach, which is 75 feet in length, is constructed of crib work, filled in with brush, stone and gravel, and the main structure is built on pile bents and covered with plank. A double row of close-piling was placed along the seaward face of the wharf, and a single row at the outer end and L face. At the end there are 16 feet of water at high water, ordinary tides, and 20 feet at spring tides.

PARKER'S COVE.

Parker's Cove, Annapolis County, is situated on the southern shore of the Bay of Fundy, about 15 miles to the eastward of Digby Gut, and is directly north of Annapolis, its nearest railway station, and distant therefrom 7 miles.

During the year 1883-84 a small breakwater, 165 feet in length and 26 feet wide, was built near the eastern end of the cove for the accommodation of small boats and fishermen. The breakwater extends outwards at right angles to the head of the cove 100 feet, and its outer end has a slight angle to the westward.

Spring tides rise at this place about 30 feet, but as there is only 8 feet of water at the end of this pier at high water it is of little use for shipping purposes, and is therefore only used by fishermen.

During the past year the sum of \$200 was expended in general repairs to the structure. These consist of ten new fenders for the inner face, renewing 80 feet of cap timber, raising the surface of the outer end 2 feet and protecting the foundation from further settlement. The work is now in good order.

PARRSBORO' BREAKWATER.

Parrsboro' Breakwater is situated on the crown of the beach, which extends out from the western side of the mouth of Partridge Island River, and forms the harbour of Parrsboro', Cumberland County.

The beach is about a-third of a mile in length, and the lighthouse is situated near the eastern end. Being only a few feet above high water mark, the sea would break over it during southerly storms, and danger existing of a breach being made through the beach, and so destroying the harbour inside, the Marine and Fisheries Department constructed a breakwater for the protection of the beach.

The breakwater, or rather the beach protection, is 1,130 feet in length, with two spurs at its eastern end 50 feet in length each, built stepping off. The work is 10 feet wide and from 4 to 6 feet in height, built of squared timber laid close, partly filled with gravel to the top, and partly ballasted with gravel and planked over.

The western end of the work, for a distance of 200 feet, having been undermined, the Department, during last season, expended the sum of \$370 upon it. With that amount the damaged portion was strengthened and secured, and the work was extended a length of 30 feet inshore, to prevent scour around it during southerly gales.

PARTRIDGE ISLAND PIER.

Partridge Island Pier is situated on the north side of the Basin of Minas, about a mile to the westward of the mouth of the Partridge Island River, and about 2 miles distant from the town of Parrsboro', the terminus of the Cumberland Railway and Coal Co.'s railway.

The pier being directly on the sea shore, it has the benefit of the full extent of the tides, and as vessels can approach it and leave it at half tide, it is the principal point of communication between Cumberland County and the Counties of King's and Hants, on the south shore of the basin; and the steamers of the Basin of Minas, and the St. John and Basin of Minas routes, call there regularly during the season.

The pier is about 500 feet in length, and its width on the top varies from 27 to 29 feet. The inner end, for a distance of 42 feet slopes 6 feet, thence to the outer end it keeps its level, which is 4 feet below high water springs. On the inside it has a narrow inclined landing to afford passengers and freight a chance to land at all times of the tide. It is built of squared timber, with perpendicular faces, and is floored over. At the outer end it is 30 feet high, and the beach dries out, at low water, about 100 feet from the end of the pier.

This pier was built during 1864-65 by the Local Government of Nova Scotia, and since Confederation it has received heavy repairs from the Department. It is exposed to south-easterly gales, and when the ice is running up and down the bay with the wind and tide, and the top being low, and the outer portion submerged during high water springs, it is in constant danger of being damaged.

During last year a small amount was expended upon it, in renewing and re-fastening some planks in the covering which had become loosened.

PARTRIDGE ISLAND RIVER.

This river enters the north side of the Basin of Minas, the south-eastern arm of the Bay of Fundy, at the Village of Parrsboro', Cumberland County, the terminus of the Cumberland Railway and Coal Company's railway (formerly the Springhill and Parrsboro' Railway). The river from the village to its mouth forms the harbour, and it is a very important shipping point for coal and for lumber.

The channel of the river is very crooked, and in the spring of 1879 the work of cutting off Robertson's, Shannon's and Mullin's Points was commenced by the Department, and continued from year to year until 1884, when the contemplated work was brought to completion.

The spit making out from the end of the sand bar on the eastern side and near the mouth of the river, and consisting of clay and gravel, has always been a serious obstruction to navigation, necessitating a very sharp turn at this point, and particularly when large steamers and vessels come to and leave the new landing pier of the company, coal laden.

The river runs dry at low water, excepting a small fresh water channel, but at high water springs there is a depth of 25 feet at the loading pier.

During the last fiscal year the sum of \$3,000 was expended by the Department in cutting away the point of the spit, the quantity of material removed being nearly 6000 cubic yards of tough clay mixed with gravel.

PICTOU ISLAND.

Pictou Island, Pictou County, in the Strait of Northumberland, is 5 miles long by $1\frac{1}{2}$ wide and about 10 miles north-east of Pictou light, the residents being engaged in fishing and agriculture.

There are two small wharves on the south side of the Island—one near the west end, built by the Provincial Government, and repaired and strengthened by the Department in 1880; and one near the centre of the Island, known as the "East Wharf," built by the Department in 1882-83.

During the year the balance of the amount appropriated for 1887-88 was expended in completing extensions of the east and west wharves. The east wharf has been extended 100 feet and the west wharf 92 feet 6 inches. The extensions are 20 feet wide on top, of round timber, ballasted and protected at the outer end by close-fendering.

The depth at extreme low water at the outer end of the east wharf is 3 feet to shifting sand, and 4 feet to hard bottom; that at the outer end of the west wharf is 3 feet. Spring tides rise 4 feet 6 inches.

PORT GREVILLE.

Port Greville, Cumberland County, is situated in Greville Bay, on the northern side of the Minas Channel, Bay of Fundy, and at the mouth of the Ratchford River. It is about 15 miles west of the town of Parrsboro', the terminus of the C. R. & C. Company's Railway, and 15 miles east of Cape d'Or.

The harbour is formed by a high gravel bar, which lies parallel to the shore, between which the river runs for half a mile before reaching low water mark. The bar although high, was, previous to 1872, covered during high water springs; but during that year a gale occurring at that stage of the tide the sea swept off the crown of the bar for a length of 2,800 feet, and to a depth of about $2\frac{1}{2}$ feet. The protection thus afforded by the bar was in a great measure destroyed, and to restore its usefulness and improve it a wall of round timber cribwork, 2,200 feet in length and averaging 7 feet in depth, was constructed by the Department in 1874.

During 1886-87 a breakwater was constructed off the eastern end of the crib-work wall, for the double purpose of arresting the gravel which was being swept into the harbor by westerly gales, and deviating the course of the river, so as to

shorten its passage to the sea. It is 250 feet in length and 21 feet wide on the top, with sides sloping $\frac{1}{2}$ to 1 on the seaward face. The work averaged a depth of 20 feet; it is built of round timber cribwork, the seaward face being sheathed with 6-inch plank, and the inner face and end being close-piled to a depth of 3 feet below the line of assumed clay bottom, to prevent scouring of the foundation. Low water mark extends out about 250 feet from the end of the breakwater. Spring tides rise 40 feet, neaps 33 feet.

PORT HOOD.

Port Hood the shire town of the County of Inverness, is on the west coast of Cape Breton, 20 miles north of the northern entrance of the Strait of Canso.

A pier 550 feet long and 24 feet wide with an L 100 feet by 25 feet, was built on the eastern shore of the harbour in 1885-86 by the Provincial Government. When first taken in charge by the Department it was in want of repairs. In November, 1871, a portion 200 feet in length was destroyed; during the two following seasons this was re-built, other necessary repairs made, and a new block, 125 feet by 25 feet, built at the outer end. Slight repairs were made in 1877-78 and 1879, and extensive repairs in 1879-82 to make good damages caused by gales in October, 1879, in August 1880 and again in November, 1881. Repairs of a permanent character were made in 1883-84, including the placing a protection work of large stones on both sides of the pier, sloping from high water on the north side 3 to 1, and on the south side 2 to 1. In 1884-85 some of the large stones of the protection work which had been disturbed were replaced. A small amount was expended in repairs to the outer end in 1887-88. While these were in progress the south end of the L was damaged below low water, and subsequently 40 feet of it was carried away.

The amount appropriated (1888-89) was expended in the construction of a new block 48 feet by 22 feet at the south end of the "L," in connecting it with the new block, and in other repairs.

The depth at extreme low water at the south or end face of the "L" is about 9 feet. Spring tides rise 4 feet.

The following is a statement of the number of trips made by steamers calling at Port Hood, their tonnage, &c., during the year ended 30th June:—

S.S. "Beaver," 99 tons, from Pictou	58 trips
S.S. "Rimouski," 84 tons, from Mulgrave.....	52 "
S.S. "M. A. Stair," 166 tons, from Halifax.....	2 "

PORT LORNE.

Port Lorne, formerly Port Williams or Marshall's Cove, is on the Bay of Fundy shore of Annapolis County, 30 miles east of Digby Gut, and it is 8 miles north of Bridgetown, its nearest railway station.

The pier at this place was begun in 1835, and was built at the joint expense of the inhabitants and the Local Government, and it is said that up to the year 1867 \$16,000 was expended upon it. Like all other similar piers on this coast of Nova Scotia, its trade has been greatly injured by the construction of the Windsor and Annapolis Railway, which has diverted much of it into other channels, but there is still quite a business done at the pier by small schooners and coasting vessels in carrying potatoes, apples, fish and cordwood to the St. John and Boston markets.

The first expenditure made at this place by the Department was in 1873-74, when the sum of \$3,500 was used in extending the work 67 feet. In 1879 some necessary repairs were made, at a cost of \$745.76, and in 1882-83 a contract was entered into for a further extension of the pier to give additional shelter to vessels.

This latter work was finished during the following year, and is 100 feet long and 36 feet wide: it is close-faced with square timber on both inside and outside, and is provided with a break 4 feet high.

During the past fiscal year the sum of \$200 was expended in effecting general repairs to the whole work. These repairs consist of some additional ballast, new

floor stringers and covering in the centre portion of the pier, five new fenders, one mooring post and strengthening the break in two places.

The outer end of the structure is still about 100 feet from low water, but owing to the range of tides, from 32 feet to 28 feet, there is 25 feet of water at the end of the pier at high water springs. The structure is 410 feet long and 36 feet wide.

ROSEWAY BEACH.

Roseway Beach, Shelburne County, is situated at the eastern end of Round Bay, and is about 10 miles due south of Shelburne town.

The beach extends from the shore outwards towards Grey's Island, and forms a natural breakwater to a small harbour behind it from which considerable fishing is done in shore boats.

The beach or bar is composed of fine white sand, which, when dry, drifts badly, and the top of the bar has gradually been getting lower and lower, until this present year, when some extra high tides came over into the harbour. The material composing the bar is so light that the tide in a short time would cut it away and destroy the harbour, and as it would be very difficult to stop an opening once made, it was important that the beach should be protected at once.

The sum of \$100 was appropriated for this work, and the beach was protected in the same manner as that of Round Bay, immediately to the westward, viz.,—brush and small trees were fastened together and laid along the highest part of the beach. These collected the drifting sand and built up the beach to its former level.

The small expenditure has proven of great benefit to the fishermen, and has saved from destruction a small but convenient boat harbour.

ROUND BAY.

Round Bay, Shelburne County, is on the Atlantic coast of Nova Scotia, about 3 miles east of Negro Harbour, and 13 miles to the southward of Shelburne.

The shores and beaches of Round Bay are composed of fine white sand which during the summer months, is liable to become very dry and drift badly with the winds off the Atlantic. The drifting takes place mostly near high water mark where the sand is dryest, and as the beaches wear away the tide flows further and further inland, destroying the sea-walls and washing away the highway which follows the line of shore round the head of the bay.

The beaches have for years been protected and the sea walls built up by placing brush and trees, with their branches left on, a short distance above high water mark. This brush, &c., in a short time collects the sand, and is buried up in it, forming an efficient sea wall at a small cost. After the lapse of some years the whole brush, and especially the finer portions of it, dry, rot and break away, so that it will no longer retain the sand.

The beach, besides forming the highway, is also a natural protection to a pond inside the sea wall, in which the fishermen keep their boats; there is an opening into this pond near the western end of the beach, known as Sand Creek.

During the first half of the present fiscal year the sum of \$100 was expended by the Department in repairing the gaps in the seawall, and also in protecting in a more substantial manner the mouth of Sand Creek. The sum appropriated was not sufficient to complete these repairs, it being found that heavier material than brush was required at the creek mouth, owing to the action of the tide against it, and a further sum of \$80 was used to complete the work. The beach and entrance to the pond is in better condition now than it has been for years, and is not likely to require further repairs for some years to come.

The range of tides is from $5\frac{1}{2}$ to 7 feet, and the beaches being very flat, they dry for a long distance out.

SHEET HARBOUR.

Sheet Harbor is situated on the Atlantic coast of Nova Scotia, in the eastern part of Halifax County, and is distant about 60 miles to the eastward of the mouth of Halifax Harbour.

The harbour is one of the finest in Nova Scotia, being of considerable extent and having an abundant depth of water. It runs inland some $6\frac{1}{2}$ miles to a point where it divides into the arms, called respectively the West and East Rivers.

There are saw and pulp mills at the head of each arm, at which a large amount of lumber is cut and a considerable amount of pulp made. The lumber is exported in large vessels, principally barques, to the United Kingdom, and the pulp is shipped in schooners to the United States. Vessels coming to Sheet Harbour generally arrive in ballast and as all the available ballast grounds have been filled in, and the further depositing of it would injure the deep water channels, during the year 1887-88 a ballast wharf was constructed by the Department at the head of the West River. It is detached from the mainland, and is 60 feet in length and 15 feet wide. The front face of the wharf and "L" have a batter of 1 in 12: the western end, the inner side and the end of the "L" are plumb, and the inner end of the wharf slopes $\frac{1}{2}$ to 1.

The work throughout is built of round timber, and the front face is sheathed with 3 inch plank. The top is 3 feet above high water springs, and along the front there is a depth of water at low water springs of 14 feet. Spring tides rise 6 feet 6 inches.

On the 9th January, ult., a contract was entered into for the construction of a ballast wharf on the north side of the East River, starting from the end of the remains of Ball's Wharf, running westerly a distance of 180 feet, and 20 feet wide, with an "L" 20 feet long and 20 feet wide at the western end, the work being built of round timber and the top, which is 3 feet above high water springs, will be covered with 3 inch plank. At 10 feet from the front of the wharf there are from 14 to 16 feet of water at low water springs. At the end of the fiscal year this ballast wharf was nearly completed.

SPENCER'S ISLAND.

The settlement of Spencer's Island is situated at the western end of Greville Bay, on the north side of the Minas Channel, Bay of Fundy, about 3 miles to the eastward of Cape d'Or and 30 miles distant by road from Parrsboro', Cumberland County, the terminus of the C. R. & C. Co.'s Railway, and steamers of the St. John and Basin of Minas route call there weekly on their way from Parrsboro' to St. John, and *vice versa*.

It derives its name from a small island lying opposite, and distant about half a mile from the mainland. To the northward of the island there is good anchorage, and safe from all winds, excepting those from east to south.

To afford shipping facilities, as well as for the shelter of small vessels and boats, during 1887-88 a landing wharf was constructed by the Department at a cost of \$5,000. It is 307 feet in length and 20 feet wide on top, and consists of an approach 15 feet long, pile-work 150 feet, and of a round timber block at the end 142 feet in length. The pile-work consists of pile bents, 15 feet apart, each having five piles. The block slopes 1 in 3 on the seaward face and 1 in 12 on the inside face, and is thoroughly put together and well ballasted. The pile work, as well as the block, are covered with 3-inch plank, and the top is 5 feet above assumed high water springs. At the end of the block there is a depth of 27 feet at high water springs, and the beach at low water dries out about 600 feet from the end. Spring tides rise 39 feet, neaps 33 feet.

During last season an amount of \$150 was expended in close piling and placing brush and stone around the north-east corner of the end, to prevent scour.

TATAMAGOUCHE.

The village of Tatamagouche, Colchester County, is situated on the western side of the Tatamagouche River, about $1\frac{1}{2}$ miles from its entrance into Tatamagouche Bay, on the south side of the Strait of Northumberland. It is distant 16 miles from Wentworth station on the I. C. R., and it is a station on the Short Line Railway now under construction between Oxford and New Glasgow.

The Tatamagouche River, between its banks at high water, is here from 1,000 to 1,500 feet in width, but the navigable channel is only from 150 to 200 feet wide. Owing to the existence of shoals in the channel, which prevented vessels leaving or entering during low water, the Department deepened and straightened the same by dredging, and a depth of 7 feet can be obtained from the wharves at Tatamagouche out to sea. Spring tides rise 7 feet, neaps $5\frac{1}{2}$ feet.

To accommodate the inhabitants living on the eastern side of the river, who were obliged to haul their produce for shipment to the wharves at Tatamagouche, a distance of 3 miles, and haul the coal which they use from the wharves to their homes, the Department finished during the last fiscal year, at a cost of \$600, a public wharf on the east side of the river and nearly opposite the mouth of the French River, which flows into the Tatamagouche half a mile below the village. The wharf is 96 feet in length, and consists of a short shore abutment and three round timber blocks, with intervening spaces. The wharf, excepting the outer block, which is 30 feet wide, is 20 feet in width and is covered with plank. There is a depth of 7 feet at low water 7 feet from the end of the outer block, and the mud flats dry out to within 10 feet of the outer end.

TROUT COVE.

Trout Cove is situated on the Bay of Fundy coast of Digby Neck, nearly midway between Digby Gut and Petit Passage.

In 1858, the inhabitants, assisted by a grant from the Local Government, built a breakwater 200 feet long and 30 feet wide. In 1876 a block 175 feet long and 30 feet wide was added by the Department, and in 1880, and again in 1881, extensive repairs were made to the old breakwater, 100 feet of which was completely destroyed by a storm in 1879, the total expenditure by the Department up to 1882 amounting to \$5,499.76. In 1882-83 it was found necessary to make further repairs, and in 1885-86, 100 feet of new facing was built into the old work, the "break" was raised and strengthened, and the outer end of the breakwater ballasted. Again, in 1887-88, it was found necessary to repair this face by constructing 140 feet of new work, and adding to the width of the "break;" some general repairs were also done at this time and new covering put down.

During the past fiscal year the sum of \$399.79 was used to repair the beach and the inner end of the work, the beach having washed away and exposed the foundation.

The present structure is 436 feet long and 30 feet wide. It is dry at low water, and at high tide there is a depth of 21 feet 6 inches at the outer end. Being the only breakwater between Digby Gut and Petit Passage, a distance of over 30 miles, considerable coasting business is done at it, and it is also important as a refuge for shore fishermen and a place to keep their boats and vessels.

WALLACE.

Wallace Harbour, Cumberland County, is situated at the mouth of the Wallace River, which empties into the south side of the Northumberland Straits, about midway between Pictou Harbour and Bay Verte, being about 45 miles to the northward of the former, and 40 miles to the southward of the latter, and is well protected from all winds, excepting those from the eastward.

The width of the river opposite Wallace is about 3,000 feet, but the navigable channel is only about 500 feet wide, the remainder of the width being composed of mud flats, which dry at low water springs. Spring tides rise 7 feet, neaps 5 feet.

Opposite the town of Wallace, which is situated on the south side of the river, a wharf was constructed many years ago, but as the communication thereto was only available at or near high water, the Department, in 1879, opened a channel, 45 feet wide and about 1,600 feet in length, with a depth of 8 feet at low water, from the main channel to the wharf.

This channel is almost at right angles to the shore line, and at high water the tide and sea sweep across it, and considerable silting up took place, particularly at

the inner end of the cut, and in 1887 it was cleaned out. The channel at present is from 40 to 45 feet wide, with a depth of water in it from 6 to $7\frac{1}{2}$ feet at low water springs.

Towards preventing the inner end of the cut from silting up, and to afford at the same time increased shipping facilities, the wharf was extended during the last fiscal year, at a cost of \$1,000. It commenced at the end of the public road, and is 165 feet in length, 20 feet wide, and composed of a series of round timber blocks and spans, covered with 3-inch plank. The work dries at low water springs, but at 5 feet from the inner face at the outer end there is a depth of 6 feet in the cut.

WESTERN HEAD.

Western Head, Queen's County, is situated on the southern side of the entrance to Liverpool Bay, and is distant about 4 miles to the south of Liverpool. It is a bold, rocky point, exposed to the whole sweep of the Atlantic, behind which there is a partial shelter that enabled fishermen to land in moderate weather and draw their boats up on the beach.

A large number of boats are kept here, and as it is often impossible for the fishermen to make a landing if they should happen to be caught by a sudden storm on their fishing grounds, and as there is no other convenient shelter to run for, it was considered advisable to construct a breakwater for their protection.

The work was begun in 1887, and during the fiscal year 1887-88 the sum of \$5,000 was expended towards the construction of a stone breakwater immediately behind and partly in shelter of the "Head."

During the present fiscal year the further sum of \$2,000 was used to complete the work. Late in the fall of 1888 and soon after the breakwater was completed this coast was visited by an unusually heavy gale, which lasted three days and destroyed the outer end of the structure and scattered the heavy stone of which it was composed over and in front of the boat landing.

The breakwater was constructed of large, flat-bedded rock, quarried on the shore side of the "Head," and picked up on the neighbouring beaches. The bottom courses were firmly bolted to the ledge wherever it showed above high water, and the facing stone of the other courses bolted each to each, and to the next course below, with inch iron. The breakwater was 40 feet wide on top and 190 feet long, and the site selected was immediately behind the highest part of the solid ledge projecting out from the "Head," so that as little as possible of the outer face of the work should be exposed to the sea.

WHITE POINT.

White Point, Victoria County, is on the Atlantic coast of Cape Breton Island, at the southern extremity of Aspy Bay. The coast south along the Atlantic to Neil Harbour distant 7 miles and west $3\frac{1}{2}$ miles to the head of Aspy Bay, is rugged and destitute of harbours or of good landing places for boats.

The amount appropriated (1888-89) was expended in excavating a dock or landing place for boats 100 feet in length, and extending 60 feet in from original high water mark. The bottom rises 1 in 5, and is at the back 12 feet above high water. The excavation was in loose rock, with clay overlying, and against a rock wall 8 feet in height. A fine beach 150 feet in length was formed between high and low water, and affords a convenient and safe landing place.

YARMOUTH.

Yarmouth harbour and town are situated at the south-western end of the Province of Nova Scotia. The town is of considerable extent, and annually exports large quantities of fish. It possesses several manufactories and a "marine railway," and a small dry dock, where vessels not exceeding 800 tons burden can be repaired.

During the year the channel in the harbour and leading to the wharves was both straightened and deepened, and a change made in the position of the "beacons," which were moved into the line of the improved channel.

NEW BRUNSWICK.

ANDERSON'S HOLLOW.

Anderson's Hollow, Albert County, is situated on the northern shore of Chignecto Channel, or north-eastern arm of the Bay of Fundy, and on the eastern side of Salisbury Bay, which lies between Cape Enragé and Matthew's Head.

The formation of a harbour at the place was first commenced by the Department in 1879-80, when an isolated block, 100 feet in length and 25 feet in width on top, was constructed at a distance of 550 feet from the shore and some 300 feet from extreme low water mark. Spring tides rise 40 feet and neap tides 34 feet.

Additions to this were made in 1883-84, and 1885-86 of 90 and 100 feet respectively.

During the fall of 1887 a contract was entered into for the construction of the remaining length (260 feet), to form a connection with the shore, and this was satisfactorily completed in August, 1888.

Repairs, consisting of re-fastening and replacing fenders and inserting blocks for strengthening the inner face of the outer 100 feet, or original block, were made, while several rocky ledges dangerous to vessels approaching or leaving the Breakwater were removed.

BELLIVEAU.

Belliveau, Westmorland County, is situated on the eastern side of the Petitcodiac River, opposite Hillsboro', Albert County, and distant about 16 miles south from Moncton, or 8 miles north from Dorchester, both important stations on the Inter-colonial Railway.

Belliveau and vicinity are thriving and prosperous settlements, the inhabitants being now principally engaged in agricultural pursuits, the destruction, in 1869, of a wharf at the place, having seriously interfered with the shad fisheries, and preventing the shipment of the surplus produce raised in the district, or the cheap import of supplies required. To remedy this, in March, 1888, a contract was entered into for the construction of a wharf 200 feet long and 24 feet in width (measured on top), after which it was arranged with the contractor to extend the work 33 feet, all of which was satisfactorily completed on the 9th November, 1888.

Spring tides rise 45 feet, neaps 38 feet. The end of the work is about 200 feet from line of low water, and there is a depth at ordinary tides of 14 feet of water, or 18 feet at high water spring tides.

CAMPBELLTON.

Campbellton, Restigouche County, is situated on the southern side of the Restigouche River, about 15 miles above Dalhousie, where the river enters the Baie des Chaleurs, and is an important station of the I. C. Railway, being the first ship-point reached after that line leaves the St. Lawrence.

It is practically the head of navigation, although the tide flows up the river some 9 miles further, but the water being shoal, prevents the passage of vessels of any size.

Except on the "Traverse" (which is being improved by dredging), the depth of 18 feet at low water springs can be carried to Campbellton, which, with the rise of $10\frac{1}{2}$ feet at springs, and 7 feet at neap tides, affords a good depth of water for the class of vessels engaged, most of those, however, arrive in ballast, the disposal of which has been a matter of serious inconvenience.

To provide a place of deposit for ballast, a contract was entered into 23rd April, 1889, for the construction of a "ballast wharf," the proposed structure being an isolated block 140 feet in length by 35 feet in width, and having at it a depth of 18 feet at extreme low water, spring tides.

At the close of the fiscal year this work was fairly in progress, the bottom courses being commenced and much of the material delivered in the vicinity of the site.

CAPE TORMENTINE.

Cape Tormentine is on the New Brunswick coast of the Strait of Northumberland, and opposite Cape Traverse, Prince Edward Island.

As stated in my report of last year, fresh tenders had been called for the completion of the wharf at this place, and in April, 1888, a contract was entered into with Mr. E. Murphy, of Toronto, for the same.

Active operations were not commenced by the contractor until August of that year, between which time and the close of the last fiscal year 729 feet of the stone approach have been built.

The work will be 2,500 feet in length, with an **L** at the outer end, consisting of two branches, each 400 feet in length. Of this length of 2,500 feet, the inner or shore end, for a distance of 1,300 feet, will be built wholly of stone, the remainder and the **L** of close-faced crib work, completely filled with rock ballast.

EDGETTS' LANDING.

Edgetts' Landing, Albert County, is situated on the west side of the Petitcodiac River, about two miles south of the railway station and village of Hillsboro'.

Many years ago, and before the construction of the Albert County Railway, when the only means of communication with this locality was by water, the Government of New Brunswick constructed what was known as the steamboat wharf, but this, during the "Saxby Gale" in the fall of 1869 was destroyed, the bottom of the structure only remaining.

To facilitate the discharge of vessels calling at the port in ballast, a contract was entered into 15th January, 1889, for the construction of a ballast wharf.

This wharf is to be 400 feet in length, reaching to within 150 feet of low water mark, and will have at its outer end 30 feet of water at high water springs, which here rise 45 feet and neap tides 38 feet, the width at the outer end being 40 feet reduced at each 100 feet inward 10 feet.

Work was commenced by the contractors in the beginning of June, 1889, and abandoned by them at the end of the month, when, having provided the greater portion of the materials required, they found themselves unable to proceed further.

FORT DUFFERIN.

Fort Dufferin is situated on Negro Point, at the western entrance to St. John Harbour, and at the inner end of the breakwater. The point is 60 feet in height, and is composed of clay and stone and the action of the sea at its base, during southeasterly gales, causes undermining, and several slides of the bank have taken place, which in some instances were so severe as to endanger the fort and threaten its stability.

In June, 1882, a face wall, 430 feet in length, 7 feet wide on top, the outer face battering $\frac{1}{2}$ to 1, was built on the beach at the foot of the glacis, and extending eastwardly from the inner end of the breakwater was continued; the glacis was re-sloped and works necessary for the proper drainage of the fort enclosure were done.

During the winter of 1882-83 a further land slide took place to the eastward of and immediately adjoining the fort property, and injured to some extent the slope formed in 1882, as well as the eastern corner of the face wall, which had been undermined by the sea. To prevent further damage to the base of the slope a further length of 303 feet of face wall was built, extending eastwardly from the work of 1882.

During the winter of 1886-87 the work, particularly the old portion, was much disturbed by the sea, caused by a succession of easterly gales, and a portion of the old wall, 205 feet in length was entirely destroyed and washed away.

In the spring of 1887 the sum of \$600 was expended in close-piling around a portion of the bank, back of the beach, to prevent further undermining.

In November, 1887, the re-construction of that portion of the work destroyed, the re-ballasting of all work, the re-sheating of damaged face-walls and the placing of

a timber break along the whole of the outer face, was proceeded with, and completed in a satisfactory manner on the 31st August, 1888.

GRAND ANSE.

Grand Anse, Gloucester County, is a small cove on the southern shore of the Baie des Chaleurs, about midway between the harbors of Bathurst and Shippegan. There is quite a thriving settlement at the place, which is also a railway and telegraph station on the line of the "Caraquet Railway," by which it is distant 30 miles from Bathurst and 40 miles from Shippegan. At Gloucester Junction, 3 miles south of Bathurst, connection is made with the Intercolonial system.

The place being near excellent fishing grounds, and this industry largely followed as a means of livelihood (some 90 boats being owned in the district), to afford protection for them, the construction of a breakwater was commenced by the Department in 1875, and carried to completion in 1879. Being exposed to the force of the sea, and the action of the ice in winter during northerly storms, almost yearly expenditures were necessary for repairs, the most serious damage occurring in the spring of 1886, when the entire top and down to 2 feet above low water was carried away by the pressure of the ice during a northerly storm and high tide, and deposited in a part of what had formerly been the boat harbour or sheltered area.

With the appropriation of 1886-87, 100 feet in length (or nearly one half) was re-constructed, its width being increased 10 feet and its seaward or exposed face formed with a slope above low water of 1 to 1, which is hoped may prevent serious injury from ice pressure. A further 60 feet of the original length was reconstructed with the appropriation of 1887-88, and with that of 1888-89 was entirely completed, as well as an addition of 10 feet made at the eastern end. Much also of the ballast and wreckage deposited in the sheltered area was removed.

HOPEWELL CAPE.

Hopewell Cape, Albert County, is situated on the western side of the Petitcodiac River, 7 miles below the town of Hillsboro' and opposite Dorchester, Westmorland County, from which it is distant 4 miles by ferry and road.

Hopewell Cape is the shiretown of the county, and the centre of a thriving settlement where in former years ship-building was extensively carried on. Off the "Cape" vessels bound to Moncton, Hillsboro, Dorchester, &c., usually anchor, the depth of water in the channel being 3 to 7 fathoms at low water, while further up the river it decreases to about 1 fathom.

It had been the practice of captains of vessels while at anchor here to throw over what ballast they had to dispose of, and this, in course of time, began to severely injure the safety of the anchorage. To remedy this the Department, in 1883, commenced the construction of a ballast wharf, a contract for a length of 380 feet being entered into 18th September, of that year, and the work was completed in August following, a further extension of the wharf 200 feet being contracted for on 5th March, 1885, and finished 27th August of the same year.

To improve as much as possible the depth of water on the length of wharf built, in the fall of 1886 a small stream passing near the northern side of the wharf was diverted, so as to pass alongside its outer 200 feet, and being somewhat widened and deepened, an increased depth of from 4 to 5 feet was obtained. The action of the stream causing undermining at the outer end, the end, 10 feet of the return and 100 feet of the northern side, were close-piled during the last fiscal year, the piles being driven to a depth of from 10 to 11 feet.

The work in all has a length of 580 feet, is 20 feet wide on top, with a return of the same width at the outer end.

Spring tides rise 45 feet, neaps 38 feet, at which stages of high water the depth at the end of the work and along the side where the stream was diverted is 18 and 14 feet, its end being distant some 400 feet from low water mark.

THE KENNEBECASIS.

This river takes its rise near the sources of the Petitcodiac, and after a south-westerly course of about 20 miles flows into the St. John, through Kennebecasis Bay.

During the season of 1888 an opening was made through the sand shoal below the Village of Hampton, and the channel approach to the draw in the highway bridge across the river at Perry's Point was straightened and deepened, and the work thus done was to enable the steamer plying between Indiantown (St. John) and Hampton to make her trips with regularity at any stage of water in the river.

MIZZONETTE.

Mizzonette Point, Gloucester County, is the extreme eastern end of the small peninsula that separates the upper part of Caraquet harbour from the Baie des Chaleurs.

It is distant by land from Grand Anse 9 miles east, and about 3 miles by water from the village of Caraquet, both of which stations are on the line of the Caraquet Railway.

To accommodate the residents of the locality, a contract was entered into on the 19th February, 1889, for the construction of a wharf, and the materials required having been got out during the winter, the work was commenced early in June, and had by the 30th or end of the fiscal year been so carried on that it was about a quarter done, the foundation of nine blocks being placed.

The work under construction consists in all of a length of 500 feet, 480 feet of which will be 12 feet wide on top, the remaining 20 feet or outer block 20 feet wide, the whole composed of "blocks" and "spans," and giving at the outer end a depth of 2 feet at low water.

Spring tides rise 6 feet, neaps 4 feet.

MADAWASKA RIVER.

The Madawaska River takes its rise in Lake Temiscouta, and after flowing southerly a distance of about 20 miles enters the River St. John at Edmunston, a thriving town on its northern bank, and the northern terminus of the New Brunswick Railway and its junction with the Temiscouata Railway.

During the last fiscal year, on its portion in New Brunswick, with the sum appropriated, the tow path along the river has been repaired, and boulders and sand bars obstructing its navigation removed.

PARTRIDGE ISLAND.

Partridge Island lies directly off the entrance to St. John Harbour dividing its approach into two channels, the principal of which is to the eastward of the island.

On the island is the station of the Marine Department for its fog-alarm, light, quarantine, &c., and to facilitate the landing of supplies, many years ago two small piers were built on the north-eastern side of the island by that Department. The piers extended to within about 60 feet of low water, forming between them a slip or dock 30 feet in width, having at high water springs a depth of 20 feet of water at the outer end, decreasing to 7 feet at the inner. Springs rise 28 feet, neaps 22 feet.

During a severe storm from the south-east in the early part of February, 1887, the outer portion of the eastern pier, owing to its having been insufficiently ballasted, was badly damaged, 100 feet of it being entirely carried away, and the wreckage swept into the dock, which was rendered unserviceable.

This was removed, and the western pier, which had also been damaged, rendered available for vessels and boats. A contract was entered into 24th November, 1887, for the reconstruction of the eastern pier, which was satisfactorily completed 10th July, 1888, a length of 110 feet of new work being built, 20 feet wide on top, sloping 1 in 12 on the inner side and 1 in 4 on the outer.

POINT DU CHÊNE.

Point du Chêne (Shediac Harbour) Westmorland County, the eastern terminus of the Intercolonial Railway and principal point of communication with ports on the Gulf of St. Lawrence and Prince Edward Island, is situated on the western side of Northumberland Straits about midway between the entrance to Richibucto Harbour on the north and Baie Verte on the south.

With the appropriation of the past year general repairs, as far as possible, have been effected to the ballast wharf and northern breakwater. The work done consisted of the raising, re-ballasting and re-planking the whole of the ballast wharf; putting in new mooring posts, and adding horizontal fenders to its face. The breakwater was ballasted where most necessary, the bolting of the close-piling re-driven, and what had been carried away replaced.

RICHIBUCTO.

Richibucto Harbour, Kent County, is situated on the south-west shore of the Gulf of St. Lawrence, about 40 miles north from Shediac Harbour (Point du Chêne), the eastern terminus of the Intercolonial Railway.

The entrance, which lies between sand beaches, is obstructed by a shifting sand bar, and in 1873 the Department began the construction of a breakwater towards its improvement. This extended in a south-easterly direction from the point of the north beach, it being proposed that one also should be built in a north-easterly direction from the south beach, the object being to confine the waters to one permanent channel, and so carry them through the bar which it was supposed the increased current would remove by scouring.

With the amount appropriated for the past fiscal year the following work was done: 1st. The portion built in 1885, 225 feet long, and damaged in the winter of the same year, has been refilled with brush and stone, extra walings being put on, making the outer face of the work nearly close, and should prevent the ballast and brush being carried away.

2nd. Entirely new work for a length of 300 feet has been constructed, similar to the above as now reconstructed, making a length in all of 800 feet of piling, brush, stone, etc., protection works inward of the breakwater proper and covering nearly all of the beach exposed to damage from the action of gales from the eastward.

3rd. Several fender piles at and near the outer end of the breakwater proper, that had either been carried away or damaged by the ice, were replaced.

High water springs rise 4 feet; neaps, 2 feet 6 inches.

SHIPPEGAN.

Shippegan Harbour, Gloucester County, formed by Pokesudie Island and the mainland on the west, and Shippegan Island on the east, is an arm of the Baie des Chaleurs, to which approach is had by Shippegan channel and gully from the Strait of Northumberland for small fishing craft of light draft.

In October, 1875, a contract was entered into for the construction of a breakwater 1,750 feet long to protect the entrance, and a dam 870 feet long to close the opening known as the "East Gully." Difficulty was had with the contractors, who suspended operations at the close of the summer of 1876. On the work being re-let in December, 1877, and operations resumed, April, 1878, the second contractors, about the end of July, stated their inability to proceed further with the work, and it was taken over by the Department.

At this time the dam was completed, about 900 feet of the breakwater raised to its proper height, and 500 feet of it partly built.

In October, 1879, a storm occurred, during which the tide rose 4 feet higher than before known, and the dam was seriously injured, while the outer 500 feet of the

breakwater, which had been left unfinished, was completely destroyed and the remaining part injured.

In 1880-81 the dam was repaired, raised and strengthened by piles driven 10 feet apart on each side, with walings and caps.

During 1883 portions of it that had again settled were raised where deemed unsafe, and an extension of 120 feet was added to the remains of the breakwater; a gap that had been made being closed as well, and other portions of the structure raised.

General repairs were again made in 1884-85, when 50 feet of the outer end was close-piled, the dam at the time being raised where settlement had taken place.

Further close-piling was done in 1886, and the work generally repaired.

During the past season a breach made in the winter of 1887-88 has been secured by the reconstruction of the length carried away (60 feet), general repairs also being effected.

Spring tides rise $5\frac{1}{2}$ feet; neaps, 3 feet.

ST. JOHN RIVER.

During the fiscal year improvements to the navigable channel of the river have been effected at the following places:

At Bear Island Bar, the former channel used having been almost filled in with gravel boulders and sediment carried into it by the freshet of the former spring, boulders, sandbars, &c., were removed from the available remaining one, so as to make it more safe and passable.

At Meductic Falls a slide that had taken place, obstructing navigation, was removed, as well as some rocky ledges lower down, general improvements being made between Nackawick and Eel River by removal of boulders that had been carried into the channel by the ice freshet.

At Grand Falls several rocky ledges were removed by blasting. At Grand Falls to Quisibus, Fish River to St. Francis, improvements were made to the tow-paths and obstructions removed from the channel, this also being done on the St. Francis, Little Madawaska and Tobique Rivers, all tributary to the St. John.

During the summer of 1888 a channel 2,350 in length was opened to a depth of 14 feet at low water summer level, through the Oromocto Shoals, which lie between Thatch and Oromocto Islands, about 10 miles below Fredericton, and extend from near Belmont Wharf to the light at the mouth of the River Oromocto, opposite the foot of Thatch Island. They are composed of sand, silt, sawdust, etc., brought down the river during freshets, and dredging every few years is a necessity.

ST. JOHN HARBOUR.

The dredge "New Dominion" operated during May and June, 1889, for the Corporation of the City of St. John, in deepening the berth for vessels alongside the Anchor Line wharf—so called.

ST. LOUIS.

St. Louis, Kent County, is situated on the south bank of the Kouchibowguacis River, about 4 miles from its mouth and 7 miles northward from Richibucto, the shire town of the county, St. Louis and Richibucto both being stations on the Kent Northern Railway that connects with the Intercolonial system at Kent Junction, 46 miles north from Moncton.

To provide wharfage accommodation at St. Louis, a contract was entered into on 6th Nov., 1888, for the construction of a wharf 200 feet in length and 30 feet wide on top, to extend in a north-easterly direction from the outer end of the south abutment of the bridge. This wharf will have at it a depth of 7 feet at low water spring tides, which rise here $3\frac{1}{2}$ feet, neaps 2 feet. Materials were got out during the winter and the work commenced during the last week of the fiscal year.

UPPER SALMON RIVER.

Upper Salmon River, Albert County, empties into Salisbury Bay at the head of the Bay of Fundy, about 4 miles north-east from Matthews Head, and 10 miles north-west from Cape Enragé.

At its mouth is situated the thriving village of Alma, the proposed terminus of the Albert Southern Railway, now about approaching completion, by which it will be distant 16 miles from Harvey, the present terminus of the Albert County Railway.

For the protection of vessels visiting the harbour, a contract was entered into in 1883 for the construction of 180 feet of breakwater on the western side of the entrance, and this work was finished in the fall of the same year.

During a severe storm that occurred on the 2nd and 3rd November, 1888, a length of about 50 feet of the sheathing, face timbers, &c., of the sloping face near the outer end of the work were carried away, which were made good by the Department during the latter part of the same month.

The work, which is some 425 feet long and 20 feet high at the outer end, is used entirely as a breakwater, no loading whatever being done at it, and has rendered great service as a shelter to vessels visiting the port.

Spring tides rise 40 feet; neaps 34 feet.

QUEBEC.

BAIE ST. PAUL.

Baie St. Paul is situated on the north shore of the St. Lawrence, about 60 miles below Quebec.

During the fiscal year the present wharf situated at Cap aux Corbeaux was extended a length of 60 feet by a width of 50 feet, the height of the outside being 30 feet, and reaching to from 12 to 14 feet depth at low water. The work was done by contract.

In 1874 and 1875 an isolated block, 200 feet by 30 feet wide, with a head 60 feet long and 50 feet wide was built, about 3,000 feet from high water mark, spring tides.

During the past fiscal year some small general necessary repairs were executed, but the block is still in a dilapidated condition.

BERTHIER (EN BAS).

Berthier, *en bas*, is in the County of Montmagny, and is situated on the south shore of the St. Lawrence, 24 miles below Quebec.

Thirty-six years ago a pier, 586 feet in length and 30 feet in width, with the exception of the last 100 feet of the head, which is 60 feet in width, was constructed.

During the last fiscal year 450 feet of the flooring was renewed. Mooring posts were renewed where necessary and other repairs made to the wharf.

Spring tides rise 20 feet, neaps 15. The depth of water at low tide at head of the wharf is from 14 to 15 feet.

CAP À L'AIGLE.

Cap à L'Aigle is situated on the north shore of the St. Lawrence, three miles from Murray Bay, County of Charlevoix. During the seasons of 1881 and 1882 a landing pier, 160 feet in length by 35 in width, with 12 feet depth at the southerly end at low water, was built by the Department.

During the last fiscal year some slight repairs were made to the pier to prevent its destruction.

Spring tides rise 19 and neaps 12 feet.

CAP CHATTE.

Cap Chatte is situated on the St. Lawrence; at the extreme western limit of the County of Gaspé.

With the amount appropriated for expenditure in 1888-89, the channel has been deepened 2 feet, the course of the river at its entrance made wider by the removal of battures of solid rock on each side, or by reducing them to the level of the bed of the river. Schooners can now run aground at the mouth of the river waiting for the tide without the risk of being thrown on the points of rocks which obstructed it before—as they have been all removed. Smaller craft are now enabled to run into the inner harbour at any stage of the tide.

The outside and inside reef, which rendered the outlet of vessels in stormy or calm weather very difficult and dangerous, have been partly removed—that is, their projecting points cut off—so that a straight and wider channel now exists affording greater facilities for vessels coming in or going out.

CAP SANTÉ.

The parish of Cap Santé is situated in the County of Portneuf, on the northern shore of the St. Lawrence, and is about 30 miles above Quebec.

At neap tides the boats can only approach the wharf when the water has risen to the height of 7 feet 9 inches, and even then with danger, owing to the boulders which obstruct the river.

These boulders form part of a reef which extends to the main channel of the St. Lawrence, a distance of about 1,100 feet, and a number of the most dangerous were blasted and removed during the year.

CHICOUTIMI.

The town of Chicoutimi is situated on the southern side of the Saguenay River, 71½ miles from Tadoussac, and is at the head of navigation.

The length of the wharf at this place is 282 feet, with a width of 127 feet, and there is a depth, at its outer end, of 7 feet at extreme low water. During the last fiscal year the flooring of the wharf was almost entirely renewed. On the north side 125 feet in length by 40 feet in width was raised 5 feet. Six fenders, 30 feet in length, 14 inches square, were placed at the end of the wharf.

COTEAU DU LAC.

Coteau du Lac, or St. Ignace de Soulanges, is situated on the north side of the River St. Lawrence, immediately below the Chute Verte, in the County of Soulanges, 34 miles above Montreal.

At this place the water rises 3 feet during the heaviest freshets, but generally the difference between high and low water is only 18 inches.

A wharf has been built, consisting of a block 100 feet long by 20 feet wide, with an approach of 110 feet, which has a width of 20 feet. There is 6 feet of water at the outer side of the block, the top of which is 5 feet above water line.

A passenger and freight shed, 20 feet by 24 feet was built on the lower side of the approach.

COTEAU LANDING.

Coteau Landing is situated on the north shore of the St. Lawrence, at the foot of Lake St. Francis. It is the chief town of the County of Soulanges, 2 miles from Coteau Station on the Grand Trunk Railway, and 36 miles from Montreal.

At the close of the fiscal year the Department was engaged in rebuilding, for a length of 800 feet, the approach to the wharf at which the Richelieu and Ontario Company's steamers make regular calls.

ETANG DU NORD.

Etang du Nord is at the western end of Grindstone Island, one of the Magdalen Group, in the Gulf of St. Lawrence.

In 1880-81 a breakwater was commenced on Etang du Nord Bay, the intention being to construct it some 750 or 800 feet in length, 32 feet in width, with a mean height of 20 feet.

In 1883-84, when 225 feet of breakwater had been built, a storm took place which carried the structure away.

As it was found almost impossible to build a breakwater at this site, on account of its being exposed to the violent storms of the Atlantic, a change was made in the location to the south side of Isle Aux Goëlands, about three-quarters of a mile to the south-west of the original site. That part of the breakwater which was sunk in 1887-88 was filled with stone during the fiscal year ended the 30th June last.

This breakwater is 500 feet long, 32 feet wide, and from 12 to 28 feet in height, with 21 feet depth of water at the end at low tides.

ILE PERROT.

Ile Perrot is in the county of Vaudreuil at the mouth of the River Ottawa, which it divides into two branches. Both the Grand Trunk and the Canadian Pacific Railways cross the northern end of the island, but the nearest station to the island is Vaudreuil and St. Anne de Bellevue. In 1887-88 a wharf was built on the south side of the island, on Lake St. Louis, one and a half miles below the church.

It consists of a block of 130 feet in length by 30 feet in width, with a depth of 8 feet of water, and is 580 feet from the shore. It was built by contract.

During the last fiscal year a length of 325 feet of pier work, 18 feet in width, was built from the shore outwards, leaving a length of 275 feet yet to be built.

ILE VERTE.

The parish of Isle Verte is in the County of Temiscouta, and is situated nine miles below Rivière du Loup and 123 miles below Quebec.

In 1887 an isolated block, 50 by 40 feet, was built, and during the last fiscal year an approach from the block to the shore has been commenced, but there still remains 800 feet to be constructed to complete the work.

LA GRANDE DÉCHARGE.

La Grande Décharge is the main outlet which passes the waters of Lake St. John into the River Saguenay.

During the past fiscal year a pier, 22 feet in length by 22 feet in width and 20 feet in height, and an ice-breaker 26 feet with a base of 16 feet in height, has been built.

LAPRAIRIE.

Laprairie is the *chef lieu* of the county of the same name, and is situated on the South shore of the River St. Lawrence, 7 miles above Montreal.

During the winter of 1886-87 two ice piers were built, to prevent damage being done during the breaking up of the ice in the spring, and they have proved thoroughly satisfactory.

In 1887-88, an embankment, 1,600 feet in length, was constructed, and during the floods of the two last winters it has proved most successful. Along the shore east of the ice pier a cribwork was built on a length of 480 feet. It is 10 feet in height and filled principally with stone.

During the last fiscal year another cribwork wall, 335 feet in length, was built to a height of 11 feet below low water, from the steamboat wharf westward. It is built of open work, 20 feet in width, with a batter of 1 in 12 on the face.

LES EBOULEMENTS.

The village of Les Eboulements, in the County of Charlevoix, is situated on the north shore of the St. Lawrence, 69 miles below Quebec.

In 1853 a landing pier, 920 feet in length by 30½ feet in width, with 12 feet depth of water at its outer end at extreme low tides, was constructed.

In 1875 a wing 50 feet long by 41½ feet wide was added to the easterly side of the original pier.

During the past fiscal year the slip on the west side was repaired, as well as that on the east. The superstructure was also repaired, and mooring posts were renewed where necessary.

A room for the accommodation of passengers waiting for the boat was built on the outer end of present pier. It is constructed on posts. Its dimensions are 45 by 25 feet; the roof is covered with metal; the whole building painted with waterproof paint.

LONGUEUIL.

The town of Longueuil, the *chef lieu* of the County of Chambly, is situated on the south side of the River St. Lawrence nearly opposite the eastern end of the City of Montreal. The Sorel and Montreal and the South-Eastern Railways have a station at Longueuil; the Richelieu and Ontario Navigation Company runs a ferry which makes hourly trips between Longueuil and Montreal.

The Richelieu and Ontario Navigation Company own a wharf at the upper end of the town, but its long distance from the business or centre portion, besides the increasing trade of the locality, demanded more wharfing accommodation, and at the request of the Town Council the Department commenced, in the spring of 1887, the construction of a pier, for the completion of which a contract has been entered into with Mr. A. Chagnon.

The pier when completed will be 1,105 feet in length, including a block at the outer end 40 feet by 80 feet; 90 feet of the pier is 30 feet in width, and the remaining 975 feet 20 feet. Six buttresses on the lower side will also be built. At the block there are 7 feet of water at its lowest stage. The pier is built 9 feet 6 inches above low water line, and it is expected that the wharf will be completed next summer.

MURRAY BAY.

Murray Bay is in the County of Charlevoix, on the north shore of the St. Lawrence, $83\frac{1}{2}$ miles below Quebec. The steamers of the Saguenay Navigation Company call daily, excepting on Monday, on both upward and downward trips.

In 1855 a pier 475 feet in length by $30\frac{1}{2}$ feet wide, with the exception of the block at the outer end, which was 180 feet in width, was built at Pointe au Pic, about 3 miles distant from the village of Murray Bay.

In 1875 a further addition of 30 feet was made to the outer block, which gave a depth of 18 feet at low water spring tides.

Spring tides rise from 18 to 20 feet; neaps 12.

During the last fiscal year the old slip on the east side of the pier, which had become useless, was built up to the height of the wharf and planked over, thereby giving an additional area of 2,310 square feet. Ninety feet of the middle roadway at the inshore end was refilled with gravel, instead of building it with plank. A new waiting-room, 30 by 24 feet, was constructed, and the old freight shed remodelled and other general and necessary repairs were made to different parts of the wharf.

Some heavy boulders and rocky shoals, which were a source of danger at the entrance to the harbor, were either removed or partially so.

NICOLET.

The town of Nicolet, distant 13 miles from Three Rivers and 28 from Sorel, is situated upon the eastern side of the river of that name, which takes its rise in Lake Nicolet, in the centre of Wolfe County, and after a course of 80 miles flows through the parishes of L'Esperance, St. Paul of Chester, St. Christophe, St. Albert, St. Clothilde, St. Monique and St. Jean Baptiste de Nicolet, emptying into the St. Lawrence on its southern side at the foot of Lake St. Peter.

The trade of Nicolet is chiefly in lumber. There are five saw mills on the Nicolet River, which are kept supplied with timber from the limits above.

Thirty-nine million two hundred thousand feet (B.M.) of timber, valued at \$274,400, were exported last year from these mills. Much of this was carried to the United States.

In the year 1881 a contract was entered into for the execution of dredging and pile-protection work at the outlet of the river, to form a harbour of refuge for schooners.

In the summer of 1882 the materials for this work were collected and prepared. In 1883 the water of the St. Lawrence was too high to admit of the pile-driving being proceeded with, so that only dredging could be done.

In the summer of 1884 the work of dredging the channel was completed. This channel is 5,000 feet in length by 75 feet in width, and was dredged to a depth of 8 feet at the lowest stage of water in Lake St. Peter.

The same year the pile-protection work was commenced at the western side of the harbour, 250 feet being built.

In the summer of 1885 the pile-protection work was extended to a length of 850 feet. In 1886 the work was increased to a length of 1,410 feet, and in 1887 to 2,038 feet.

In 1888 the work was resumed on the 20th July and was discontinued on the 29th September—543 lineal feet having been built during the fiscal year.

PAPINEAUVILLE.

A channel or opening 1,000 feet in length and 50 feet in width, except at the inner end, where it is 75 feet wide, has been opened to a depth of 7 feet below low water in the river through the peninsula at Papineauville, separating the Ottawa from Pentecost Bay, to give free access to the bay at all times, and dredging was done to a depth of 7 feet in front of and around the wharf at Papineauville, to permit the approach of steamers during the lower stages of water in the Ottawa.

PERCÉ.

Percé is situated in the County of Gaspé, and is for judicial and all other purposes the *chef lieu* or chief town of the District of Gaspé. By the public highway it is 156 miles from the Intercolonial Railway at Campbellton, N.B. By steamer "Admiral" it is only thirteen hours from Dalhousie, N.B., railway station. The Quebec and Gulf Port steamers call there also, to land and take freight and passengers in boats.

The landing pier commenced in the winter of 1888 was completed in May last. It was built by contract, and its dimensions are: length over all on top 320 feet; width on top, 20 feet; height at outer end, 36½ feet—of which 26½ feet only are above the bed of the river, it having settled down some 10 feet during construction; depth of water at outer end is 16 feet at low spring tides, with a rise and fall of from 5 feet to 5 feet 6 inches in full spring tides and 3 feet ordinary neap tides.

POINTE AUX ANGLAIS.

Through the boulder shoals in front of the wharf at Pointe aux Anglais a channel 100 feet in width has been opened to a depth of 7 feet at low water, eastwardly from the wharf to deep water in the Ottawa.

PORT AU PERSIL.

Port au Persil is a small village some 15 miles below Murray Bay, on the north shore of the St. Lawrence.

During the fiscal year ended 30th June, 1889, the most dangerous boulders and rocks were removed from the harbour.

RAPIDE MANIGANCE.

This rapid is on the St. Maurice River. It is one of the largest between Grandes Piles and La Tuque. It is 5½ miles above the outlet of the River Mekinac, 18 miles above Grandes Piles, and 55 miles north of Three Rivers.

There is a good channel obstructed however at points by boulders, running through this rapid, varying in depth from 9 to 18 feet at low water (summer level).

In October, 1888, 123 large boulders, measuring 210 cubic yards, were removed.

RIVER DU LIÈVRE.

The River du Lièvre flows into the Ottawa, 18 miles below the city of Ottawa. Its general course is southerly, and its width for 20 miles above the mouth varies from 300 to 600 feet.

To illustrate the great trade and business done on this river, it is only necessary to give the output of timber and phosphate during the last twelve months:—

Railway ties	40,000
Cedar posts.....	30,000
Square timber, (cubic feet).....	154,395
Lumber, (M. B. M.).....	46,500,000
Phosphate' (tons)	27,537
Mica, (lbs)	10,000
Feltspar, (tons)	50

It was with the intention of fostering especially the phosphate industry and facilitating its transport from the mines to the nearest railway, which is at Buckingham, that a contract for the construction of a lock and dam at the Little Rapids was entered into in December, 1886, with Messrs. Poupore & Co. The lock and dam will be of sufficient height to flood the Long Rapids, about $7\frac{1}{2}$ miles above the site of the lock, and therefore will give an uninterrupted navigation of 22 miles—that is, from the village of Buckingham to the foot of High Falls. The lock has a length of 160 feet between the gates and 32 feet 7 inches in breadth, with 8 feet of water on the mitre sills. Entrance piers are also under construction. Proper provision will be made for the passage of timber over the dam, which is being constructed 11 feet above low water at the head of the Little Rapids.

RIVIÈRE DU LOUP (EN BAS.)

Rivière du Loup in the County of Temiscouata, is on the south shore of the St. Lawrence, and is distant from Quebec 114 miles. The work of deepening the river of sand banks was continued during the past fiscal year, and boats and schooners of from ten to one hundred tons burden can now load and discharge at Pelletier's wharf at the town.

RIVER L'ASSOMPTION.

At Charlemange, at the junction of the L'Assomption with the north branch of the Ottawa, at the foot of the island of Montreal, a shoal was removed together with obstructions which had gathered in the channel at that point.

RIVER MEKINAC.

The River Mekinac takes its rise in Lake Mekinac, in the County of Chaplain, and flows southward a distance of 18 miles, and empties into the St. Maurice $49\frac{1}{2}$ miles from the city of Three Rivers. Its depth varies from 1 to 12 feet.

There are several rapids on this river. One, which is 6 miles from its outlet, is about a mile long, and is called the "Rapide Blanc."

The communication between St. Roch and Les Grandes Piles in summer is by boat and in winter by the ice; from Grandes Piles the train, twice a day, carries passengers and freight to Three Rivers.

During the month of September, 1888, some boulders were removed from the channel of the Rapide Blanc, and its navigation was improved thereby.

RIVIÈRE OUELLE.

Rivière Ouelle, in the County Kamouraska, is on the south shore of the St. Lawrence, 75 miles below Quebec. The wharf, 1225 feet in length, with a width of 35 feet and a "T," at the head, 50 feet in width, and 105 feet in length, was built many years ago.

This wharf is situated at Pointe aux Orignaux, six miles from Rivière Ouelle and six from St. Denis. The depth of water at the head of this wharf is 16 feet at the lowest tide which has a rise of 20 feet at springs.

A small amount of repairs only were executed.

RIVER RICHELIEU AT SOREL.

The Richelieu flows into the St. Lawrence, on its southern shore, at Sorel, 45 miles below the city of Montreal and 37 miles above Three Rivers.

In addition to the two ice piers spoken of in the report of last year as having been built to afford protection to the then town (now city) of Sorel, during the run of ice in the spring, a third was built during the last fiscal year, for the same purpose as the former two. It stands in 12 feet of water, about 200 feet from the shore, and is situated 2,400 feet further up the stream than the second pier built in the previous year.

RIVER RICHELIEU.

A channel was opened through two shoals in the Richelieu, at St. Antoine, off Gatiens and Gendron's wharves, to a depth of 7 feet at low water in the river.

At Lacolle a loading berth, 250 feet in length, 50 feet in width and 8 feet deep at the outer and 7 feet deep at the inner end, was opened alongside of the wharf.

RIVER ST. FRANCIS.

This river takes its rise in Lake St. Francis, in the County of Beauce. It flows south-west through the Counties of Beauce and Wolfe, crossing the north-west corner of the County of Compton, and takes a sharp turn to the north-west, at Lennoxville. It then flows through the counties of Sherbrooke, Richmond, Drummond and Yamaska, and empties into Lake St. Peter on its southern shore, 11 miles below the Isles of Sorel, and 3 miles from the mouth of the River Yamaska.

The bed of the river at its outlet is divided into several channels by a group of small islands.

At the mouth of the river and other points between it and the saw mills, shoals existed, which interfered greatly with the navigation. To relieve this, dredging was begun on the 21st May, 1888, and discontinued on the 6th July.

On the 29th August, 1888, work was resumed and continued till the 8th November, at which date a channel 40 feet wide was opened from Hertel channel down to the first bend, 1,100 feet in length and 5 feet deep at low water.

Work was commenced opposite Tourville's Mills on the 24th June last and was in progress on the 1st July.

RIVER YAMACHICHE.

This river takes its rise in the Laurentide Mountains, flows through the County of St. Maurice and empties into Lake St. Peter, about sixteen miles above Three Rivers.

The western bank of this river is, for the most part high, and it as well as the low-lying eastern shore are composed of clay.

At the point where this river crosses the western limit of the Parish of St. Boniface de Shawenigan a land slide occurred, by which the western bank for a distance of over 3,000 feet by a width averaging 5 acres slipped completely across the river and lodged on the opposite side.

This had the effect of obstructing the river, and inundating the land above.

In 1884 a channel was partially cut through the obstruction, so as to bring the water to its normal level and free the flooded land. In the summer of 1885 this cut was continued and opened to a width of from 6 to 8 feet, by about 10 feet in depth. This had the effect of reducing the level of the water sufficiently to permit of the cultivation of many hundred acres of land which had been flooded.

In the summer of 1888 the work of deepening the channel was resumed over a distance of about 2,500 feet, which had the effect of reducing the water an additional range of 8 feet, and brought it to its normal stage.

RIVER YAMASKA.

This river takes its rise in the Township of Bolton, in the County of Brome. It forms an outlet for several large lakes, and has a course of about 90 miles. It flows through the counties of Brome, Missisquoi, Rouville, Bagot and St. Hyacinthe, Richelieu and Yamaska, and empties into the head of Lake St. Peter on its southern side, eight miles below Sorel.

A contract for the construction of a lift lock and dam at Ile à Cardin, one mile and three-quarters below the village of St. Michel de Yamaska and about four and a-half miles from the mouth of the river, was entered into in the year 1880. This work was completed in 1886. It gives a rise of $5\frac{3}{4}$ feet.

By the construction of these works, and by dredging done subsequently on the shoal below the lock, the river has been rendered navigable for vessels of moderate draught up to Belle Point, or Rapide de la Grosse-Roche a distance of twenty miles.

In August last, 1888, the crib work at the lower end of the lock was undermined for a distance of 185 feet, and a row of sheet piles were then driven along the upper side of the crib, to prevent the water from rushing into the river by the break, and also relieve the pressure of water on the cribs at the breaks, so that the work of filling up could be proceeded with. Bags of clay and sand were then used to stop up the breaks.

In October of the same year further damage was done to the works, which were made good in the same manner.

The lock was opened 382 times during the season of 1888.

THE SHIP CHANNEL—RIVER ST. LAWRENCE.

The first movement in the matter of a deep-water channel for ships between Montreal and Quebec was made in 1825. In February, 1826, a petition from certain of the merchants of Montreal was presented to the Legislative Assembly of Lower Canada, in which it was stated that the interest and prosperity of the Province, as well as of Upper Canada, required that the removal of obstructions should be proceeded with, and the river, to as great an extent as possible, rendered navigable for vessels from and to the sea; and further, that for the sum of £36,000 a channel 16 feet deep at low water could be made, which would permit the passage, at those seasons of the year when the water was the lowest, of vessels of 250 tons burthen with a full cargo.

Between 1826 and 1831 efforts were made to induce the Government to grant aid to the enterprise, but without any results. From 1831 to 1836 the matter remained in abeyance, when the merchants of Montreal again approached the Legislature for aid to make a survey of Lake St. Peter, and met with a refusal.

In 1838 the Montreal Committee of Trade petitioned the Legislative Assembly for a grant of money to make a survey of Lake St. Peter, and stated that the navigation of the lake during the greater part of each season was limited to vessels drawing from 10 to 12 feet; that the draught of vessels in the trade between Montreal and the United Kingdom averaged from 14 to 16 feet; and that a considerable portion of their cargoes had to be transferred, to enable them to pass through the lake, thus entailing upon the trade at Montreal an immense annual expense, as well as causing detention to the ships. In reply to this petition the sum of £500 was appropriated "as an aid towards causing a survey to be made of Lake St. Peter in this province."

Nothing more of an official character appears until 1841, when the Provincial Secretary informed the chairman of the Select Committee of the House of Assembly "that the improvement of the navigation of Lake St. Peter will be considered with other public works."

From the report of this Select Committee it is gathered that a survey of the lake was in progress; that during the year 1840, 97 vessels, aggregating 28,660 tons, arrived from sea in the port of Montreal; and that the charges for towage and, lighterage on 42 vessels of a burthen of 14, 179 tons, amounted to £6,141.

Actual operations soon followed, and up to the close of 1845 an expenditure amounting to £59,994 had been made, of which £37,937 went for dredges, steamers, outfit, &c.

In May, 1846, before a committee of the House of Assembly, it was elicited that a straight cut had been made in Lake St. Peter to a depth about equal to the old natural channel, and to a width varying from 100 to 150 feet, and that a vessel had passed through it in October, 1845.

A difference of opinion having arisen as to whether it was advisable to abandon the new cut and proceed to improve the old, or natural channel, operations were suspended early in June, 1846, and Captain Bayfield, R.N., was employed to investigate and report relative thereto, which he did to the effect that the new channel should be carried on to completion to a depth of 14 feet below ordinary summer low water, and to a breadth of 300 feet. This suggestion having been accepted work was resumed late in the fall of 1846, but opposition to the new, or straight channel, had not ceased, and the matter again came before a Select Committee of the Legislative Assembly, which reported that they had considered the voluminous documents submitted to them, that they had evidence that the cut through the St. Francis bank to make an artificial channel through Lake St. Peter had been undertaken and proceeded with on erroneous data of the contemplated expenditure. In the spring of 1847 work in the new channel was resumed and carried on till September of that year, when it was suspended.

In August, 1850, this work was transferred from the Commissioners of Public Works of the Province to the Harbour Commissioners of Montreal, who, in October, 1850, instructed a board of experts to report on Lake St. Peter with the view of adopting the best means for obtaining a 16-foot channel at the lowest stage of water, and in the instructions prepared by the Harbour Commissioners it is stated that an outlay of \$320,000 had been made in the new channel up to 1846, when the work had been stopped by the Provincial Government.

The board of experts advised that the old channel should be adopted, and improved to a width of 450 feet and a depth of 16 feet, and that the new channel should be abandoned.

In June, 1851, operations were commenced in the old—the present channel,—and continued by the Harbor Commissioners until the close of the season of 1854, when the channel was virtually completed to the depth of $16\frac{1}{2}$ feet at low water, and to a width varying from 250 to 300 feet, the expenditure by the commissioners amounting to £74,000, including £10,000 paid to the Board of Works for two dredges.

In March, 1855, Mr. T. C. Keefer, C.E., reported to the Commissioners, reviewing the past progress of the works and giving his views as to future operations. From that report it is learned that the “attainment of a draught of 20 feet at low water is as practicable as it is desirable,” and that the cost of a channel to that depth, and a width of 300 feet through all the obstructions met with between Montreal and Quebec, might be placed at £90,000.

In November, 1857, Messrs. Childe, McAlpine & Kirkwood, were appointed a board of engineers to consider the best means of providing additional harbour accommodation at the port of Montreal and they were asked to state whether the Commissioners had or had not acted wisely in deepening Lake St. Peter, and otherwise improving the navigation between Montreal and Quebec, and they reported “that the port of Montreal is the proper place for transferring cargoes from the interior to sea-going vessels, and therefore the Harbour Commissioners are right in their plans for deepening the channel below Montreal, so as to allow vessels drawing 20 feet to come to the latter port.”

In November, 1865, the 20-foot channel, 300 feet in width, had been accomplished. Between 1866 and 1869 operations were confined to cleaning up, widening where necessary, and improving the channel; and as a natural sequence, facilities having been given for the passage of vessels drawing up to 20 feet, the size and dimensions of vessels were increased to such an extent that an agitation arose to obtain a depth of 24 feet, and in May, 1873, an Act was assented to granting a loan of

\$1,500,000.00 for completing the ship channel in Lake St. Peter and the River St. Lawrence to a depth of not less than 22 feet at low water, and a width of not less than 300 feet; and in July, 1873, an Order in Council was passed giving permission to the Harbour Commissioners to purchase the necessary dredging plant.

The depth of 22 feet was completed in November, 1878, when an official test was made. In October, 1882, the channel was again tested, and a clear depth of 25 feet at low water was found at all points above Cap à la Roche, where and at Cape Charles adjoining, advantage had to be taken of a good average tide to pass with the full depth available elsewhere.

In June, 1883, further legislation having been obtained, work was commenced in obtaining a depth of $27\frac{1}{2}$ feet at low water in the ship channel, except at Cap à la Roche and Cape Charles, where that depth could be obtained at nearly half tide.

With the exception of Cap à la Roche and Cape Charles, the depth of $27\frac{1}{2}$ feet was completed in November, 1888, and tested by the passage of the *S. S. "Sardinian"* carrying a spar lashed to her side extending to that depth.

During the later years of work on this channel the merchants and others interested in the trade and traffic of the port of Montreal, advanced the statement that that trade and traffic should not bear the burden of the cost of the ship channel, which should be deemed to be a national and not a local work, and not for local purposes only, but for the purposes of the Dominion; and with this view an Act was passed during the Session of 1888 relieving the Harbour Commissioners of Montreal of their indebtedness with respect to the ship channel, and transferring the work, plant, &c., to the Department of Public Works, and during the season of 1888 operations for the completion of the channel were carried on by the Harbour Commissioners for and on behalf of the Department.

In January 1889, the control and management of the work was assumed by the Department. During the winter extensive repairs were made to the dredging plant, which, on the opening of navigation, was placed to work at Cap à la Roche, Poulter Rayer and Cape Charles, in deepening the channel at those points, which are adjacent to each other, to $27\frac{1}{2}$ feet below low water, spring tides, and up to the close of the fiscal year a fair commencement had been made.

The channel which has been opened is 300 feet wide on the straight portions, and 320 feet wide at the bends, but it has been found difficult in many places to navigate large vessels by reason of these bends, or the position of the channel where the "set of the current" has been crossed obliquely, and a further expenditure will have to be made to improve the channel at such points.

ST. ALPHONSE.

St. Alphonse is at the head of Ha! Ha! Bay, River Saguenay, about 66 miles above its mouth.

This wharf is 445 feet long and 25 feet wide, the end block being 77 feet in length, with a width of 55 feet. A slip has been built on the north side of the wharf in order to make it easier for vessels of small tonnage to load and unload their cargoes.

The flooring of the wharf was also renewed over a length of 300 feet with spruce timber 6 inches square.

STE. ANNE DU SAGUENAY.

Ste. Anne du Saguenay is in the County of Chicoutimi, on the River Saguenay, opposite Chicoutimi.

Timber required for the proposed wharf having been obtained during the previous year, the work of construction was commenced during the past year, and a length of 77 feet was built.

There is a depth of water at its outer end of 2 feet at low water. neaps.

ST. LAURENT.

The village of St. Laurent is situated on the Island of Orleans, 15 miles below Quebec.

The pier at this place is 583 feet in length, the block at its outer end being 104 feet by 32 feet wide, the remainder 32 feet in width. Some general necessary repairs were made to enable it to be used for traffic.

ST. PLACIDE.

Dredging was done in front of and also to the westward of the wharf at St. Placide, to increase the area of the basin and afford more room for the turning and accomodation of vesels. An old wharf crib, lying to the south-west on the shoal fronting the wharf was removed, as it was in the high water channel, and formed a serious obstruction to vessels entering from the eastward.

STE. ANNE DE LA PERADE.

The river of St. Anne takes its rise in the County of Quebec. It crosses the counties of Portneuf and Champlain, and empties into the St. Lawrence on the north shore, at Ste. Anne de la Perade, 54 miles above Quebec and 23 miles below Three Rivers.

This river is for the most part very shallow, and abounds in rapids. In the vicinity of its outlet the banks are low, but some miles further inland they are much higher.

The depth of water at the outlet varies from 2 to 5 feet.

To give easier access to the saw-mills and factories at the village, some dredging was done in the mouth of the river. A cut was dredged to a depth of 6 feet at low water, 30 feet wide by 1,028 in length.

Owing to the shallowness of the water this work could be done only at high tide.

The tides here vary from 1 to 5 feet.

In the summer of 1888 the dredging was resumed on the 4th June, and was discontinued on the 7th July, during which time a channel 30 feet long was dredged to a depth of 6 feet.

STE. ANNE DE SOREL.

Ste. Anne de Sorel, in the County of Richelieu, is three miles below Sorel, on the southern shore of the St. Lawrence.

To afford additional protection to the farm houses and buildings of this rich agricultural but low-lying district, another ice pier was built during the last fiscal year at the entrance to the Chenal du Moine, about $1\frac{1}{2}$ miles below the Village of Ste. Anne.

The dimensions of this pier are 30 feet by 24 feet, and 21 feet 6 inches in height.

TADOUSSAC.

Tadoussac, or Anse à l'Eau, is at the mouth of the River Saguenay, on its southern bank

The wharf at this place is 366 feet in length, with a width of 26 feet, the end block being 40 by 50 feet. The height of the wharf at the end is 29 feet, and there is a depth of $7\frac{1}{2}$ feet at extreme low water.

During the past year a part of this wharf was rebuilt and raised 3 feet, a slip was constructed and the flooring renewed.

TROIS PISTOLES.

Trois Pistoles, in the County of Temiscouata, is on the south shore of the St. Lawrence, 148 miles below Quebec.

During the last fiscal year an extension 60 feet in length by 30 feet in width was commenced, but was not completed at the close of the fiscal year.

ONTARIO.

BELLEVILLE.

Belleville is the capital of the County of Hastings, and is situated at the mouth of the River Moira, which flows into the Bay of Quinté, 43 miles west of Kingston and 113 east of Toronto.

The harbour is well sheltered, but was obstructed by several shoals of sawdust and mill refuse brought down by the river. In 1874 the Department continued the work of dredging which the municipality had commenced, and in 1875 and subsequent years, up to 1882, further dredging was done, towards which the municipality contributed \$3,000.

In 1884 a contract was entered into for deepening the harbour, and the work continued for two years, the expenditure being \$8,170.42.

In September, 1886, a further contract was entered into for dredging a channel as an outlet for the waters of the River Moira during freshets, the municipality paying half the expense. This contract was completed in July, 1889.

BRIGHTON.

Brighton, Northumberland County, is on Presqu'île Harbour, Lake Ontario, 22 miles from Belleville.

Dredging was executed to a depth of 14 feet below low water in Lake Ontario, in front of and to the eastward of the wharf at Brighton, and several sunken cribs in proximity to the wharf, which were the cause of difficulty and danger to vessels approaching or leaving, were successfully removed.

COBOURG.

The harbour of Cobourg, in the County of Northumberland, is situated on the north shore of Lake Ontario, some 96 miles west of Kingston and 72 miles from Toronto, in the electoral district of West Northumberland.

The work of forming the harbour of Cobourg was commenced by a company organized by an Act of Parliament in 1829. In 1842 the works were assumed by the Government and held until the 27th May, 1850, when they were sold to the Town Council of Cobourg.

At the time of Confederation, 1867, the work consisted of two piers, the united length of which was 2,047 feet. They were 190 feet apart at the entrance of the harbour, and enclosed an area of about $12\frac{1}{2}$ acres of water, the depth at the outer end of the east pier being 14 feet, decreasing to 7 or 8 feet in the centre of the harbour.

In 1873 a contract was entered into for the construction of a pier 1,500 feet in length, 30 feet wide, from the foot of Hibernia street, and the work was completed in 1876, towards the cost of which the Harbour Trust contributed.

In 1881-82 a further extension of this pier, in a south easterly direction, was placed under contract and completed in 1883.

The works carried out during the fiscal year 1888-89 consisted in the reconstruction of the superstructure of the outer 150 feet of the Langevin or western pier, under a contract with Mr. J. W. Dinwoodie. The superstructure of the west pier of the original harbour was found to be badly decayed, and repairs were made to it during the months of April, May and June, and at the close of the fiscal year were still in progress.

GODERICH.

Goderich, Huron County, is at the mouth of the River Maitland, which flows into Lake Huron on the eastern coast, 60 miles above Sarnia.

A channel was opened to a depth of $18\frac{1}{2}$ feet below lake level, through the shoal off the mouth of the harbour. Dredging was also done inside the harbour at the Commercial wharf, and along the south pier to a depth of 17 feet.

KINCARDINE.

This harbour is situated on the eastern coast of Lake Huron, 31 miles north of Goderich, at the mouth of the Penetangore River.

In 1856 two parallel piers were built 100 feet apart, the northern pier being 540 feet in length and the southern one 290 feet, the latter being extended and completed in 1868.

In 1869 a survey of the harbour was made, when it was found that the depth between the entrance piers was from 7 to 10 feet and in the inner basin from 6 to 10 feet.

In 1872 dredging was commenced, and was continued until 1877, when the whole of the inner basin, about 4 acres in extent, had been dredged to 12 feet, and the entrance to 13 feet.

Since then further dredging has been done, giving 15 feet at the entrance along the northern pier. The entrance piers have also been considerably extended, the north pier being now 1,225 feet in length, the southern one 900 feet in length, with a width of entrance of 200 feet, so as to afford greater facility for entering the harbour.

In 1876 the northern pier was damaged by a storm, and this had to be repaired and the superstructure re-built.

In November, 1881, a contract was let for the construction of 790 feet of pile protection work on the south side of the southern pier, which was completed in 1883.

From the 1st of July, 1882, to the 30th of June, 1889, yearly improvements have taken place, consisting of dredging and repairs to the northern and southern piers. The work of rebuilding the wharfing around the inner basin was commenced in 1885, and is being continued at the present time. When finished it will afford splendid wharfing accommodation. The nature of the new work is sheet piling, strongly braced to anchor piles, and a platform 12 to 16 feet in width resting on walings.

The work of dredging has also been systematically carried out, and the depth of water is now 16 feet between the entrance piers and 12 feet on an average in the inner basin.

During the summer of 1888, and again in June, 1889, dredging was prosecuted in removing the sand which had accumulated between the piers at the entrance to the harbour, and in deepening the basin or harbour proper, the whole to a depth of 15 feet below low water in Lake Huron.

KINGSTON.

Kingston is situated at the outlet of Lake Ontario, 172 miles west of Montreal.

At the close of the fiscal year ended 30th June, 1888, the work of removing Point Frederick shoal, which was commenced in 1883, was in progress, and was carried on until the 20th November, when it was closed for the winter months. It was resumed on the 7th May, 1889, and at the close of the fiscal year 3,890 cubic yards of rock were removed.

KINGSTON—DRY DOCK.

In March, 1889, a contract was entered into for the construction of a dry dock at Kingston, on an admirable site in the centre of the harbour, which had been obtained on reasonable terms.

The dock will be built entirely of stone, and its principal dimensions are as follows:—

	Feet.
Length on the floor.....	280
Width "	40
Width at coping level	72
Depth from coping to floor.....	26
Depth of water on sill at low water.....	15½
Width of entrance.....	48

[1889]

The entrance will be closed by an iron caisson, as at Quebec and Esquimalt, and centrifugal pumps will be employed to empty the dock.

Up to the close of the year merely a beginning had been made of the actual work, as much plant had to be obtained and placed on the ground.

KINGSVILLE.

Kingsville, Lake Erie, is in the electoral district of South Essex, is on the Detroit, Essex and Lake Erie Railway, and is distant 25 miles from the mouth of the Detroit River.

In July, 1883, a contract was entered into for the construction of a harbour of refuge at Kingsville. The old pier, 860 feet in length, was thoroughly repaired, and a second pier, 1,400 feet in length, 15, 20 and 30 feet in width, was constructed in such a position as to give the harbour a superficial area of 9 acres, the width at the entrance being 150 feet. A large portion of this harbour was dredged out to 12 feet depth at different times, and during the fiscal year 1888-89 a further quantity of dredging was done.

LITTLE NATION RIVER.

The Little or South Nation River flows through the counties of Grenville, Dundas, Stormont, Russell and Prescott, and empties into the Ottawa River at Wendover. Above the village of Casselman, in the County of Russell, the river is not navigable, but from that point to the village of Plantagenet, a distance of 36 miles, it is navigable, with the exception of a short distance, at the mouth of Moose Creek, which flows into the Nation River. There a rocky shoal is found, extending over a length of 700 feet, there being from 2 feet to 2 feet 6 inches of water over it. For the last three seasons work has been done towards the removal of this obstruction. The channel made is 60 feet in width, with a depth of 5 feet 6 inches at low water, which is sufficient for the small steamers using this river. Some 4,000 cubic yards of rock have been removed, besides a certain quantity of clay and alluvial deposit.

The villages which will benefit by the improvements made are Casselman, Lemieux, The Brook, Pendleton, Riceville, Fourniersville, Curran and Plantagenet, which are all on either shores of the river.

MEAFORD.

Meaford, an incorporated town in the County of Grey, is situated on the Georgian Bay, 18 miles west of Collingwood and 20 miles to the eastward of Owen Sound.

Prior to Confederation a pier 500 feet long, having 14 feet of water at its outer end, was built by the local authorities, aided by a grant from the Government. This pier, which is on the west side of the Big Head River, was extended 160 feet during 1874-75, and an arm 200 feet long was built in a north-easterly direction, in order to afford protection against north-east winds. A breakwater 410 feet long was also built on the east side of the river.

In 1878, and in 1880-81, the Department engaged in dredging to 12 feet inside the western pier, deepening the channel to the inner harbour, which had been partly dredged to 11 feet by the local authorities.

In 1883-84, 850 feet of sheet piling were built on the west side of both the inner and outer harbour and substantial repairs made to the west pier, these repairs being completed in 1885. In 1886 further dredging was done and in 1887-88 the town contributed \$3,000 and the Government \$5,000 to complete the dredging in the inner harbour to 13 feet, and to dredge a 100-foot channel 14 feet deep to it from the outside, which work was satisfactorily completed.

OAKVILLE.

Oakville, in the County of Halton, is on Lake Ontario, 22 miles west of Toronto and 18 miles east of Hamilton, and the harbour is formed at the mouth of Sixteen Mile Creek.

In November, 1886, a contract was entered into for rebuilding the outer 360 feet of the east pier which had been carried away by a storm. This contract was completed in October, 1887. At the same time the channel between the two piers was dredged to a depth of 12 feet at low water.

In 1888 the western pier was rebuilt from low water mark, these repairs being satisfactorily completed during the fiscal year 1888-89.

PENETANGUISHENE HARBOUR.

The harbour of Penetanguishene is situated on the north of the eastern peninsula in Georgian Bay, formed between Nottawassaga Bay and the waters of the Severn.

During the summer of 1880 dredging was done at the western point, south of Reformatory wharf, and to the north of the wharves at the village, to give a depth of 16 feet in the channel.

During 1888-89 a pile structure, 12 feet in width and 850 feet in length, was constructed in an average depth of 12 feet of water. Behind this structure an embankment 30 feet wide was formed with brush, stone and earth, giving to the wharf so completed a total width of 42 feet. In addition to this wharf a similar structure 350 feet in length was built up at the foot of Barrie street.

Penetanguishene is the terminus of one of the branches of the Grand Trunk Railway on Georgian Bay. A large quantity of lumber is shipped to that place from the north and east shores of the Georgian Bay for distribution throughout Ontario.

PORTAGE DU FORT BRIDGE.

In 1885-86-87, the Interprovincial Bridge which crosses the Ottawa River at Portage du Fort, about 60 miles above the City of Ottawa, was rebuilt. This bridge is 1,000 feet long. It consists of six piers and two abutments with a stone approach of 335 feet. The spans, one of 42 feet, four of 60 feet, one of 27 feet and one of 47 feet, and superstructure, are built of wood.

There is another bridge 315 feet in length crossing a branch of the Ottawa from the above mentioned island to the Quebec shore at the village of Portage du Fort, and during the fiscal year the superstructure was entirely rebuilt.

PORT ALBERT.

Port Albert, at the mouth of Nine Mile Creek, is situated on the eastern shore of Lake Huron, about 9 miles north of Goderich.

A small pier was first constructed by the local authorities, and in 1875 the Department built an addition thereto of 50 feet in length, and constructed a small breakwater of crib-work, 75 feet long, on the south side of the creek. In 1881 and 1882 a row of close piling, 300 feet in length, was driven from the eastern corner of the pier eastwardly, and the basin so formed dredged to a depth of 10 feet.

During the fiscal year 1882-83 the improvements were further continued, earth and clay being deposited behind the works on the northern side of the harbour and 90 feet of close-piling driven at the eastern end in addition to the construction of other work.

In 1884-85-86 and 1888-89 further repairs were made, and 300 feet of close sheet piling built on the eastern side of the north pier, to prevent earth from sliding into the harbour.

PORT ARTHUR.

Previous to 1870 Port Arthur was known as Prince Arthur's Landing, and so called by General Wolsely when the Imperial and Canadian troops were landed *en route* to suppress the first uprising in the North-West; and for many years it was the commencement of the combined land and water route over which emigrants and others seeking homes in the North-West had to be taken to reach their several des-

tinations; but with the formation of the Province of Manitoba, the construction of lines of railway from the United States system to Winnipeg, and the completion of the Canadian Pacific Railway, this route was abandoned, after having rendered good and useful service.

Port Arthur, at the head of Thunder Bay, situated as it is at the head of Canadian navigation on Lake Superior, has become a very important place, and the point—for the River Kaministiquia and the facilities for shipment which it affords is now incorporated as part of the harbour of Port Arthur under the customs regulations—through which all the products of the North-West must pass, either by land or by water; and for the purpose of protecting the wharves and the harbour proper, the construction of a length of 2,000 feet of the proposed breakwater was commenced in 1884 and carried successfully to completion in February, 1886.

In February, 1887, the construction of a further length of 1,600 feet, in addition to the work completed in the previous year, was commenced, and in November, 1888, it was finished; and a talus of stone was placed against the outside of the work, which has added to the strength of the structure, as has been proved during the many furious storms which have occurred since it was put in place.

In October, 1888, a contract was entered into for the construction of a further length of 1,500 feet of breakwater, with block piers at each end, to the westward of the work already completed, an opening of 350 feet in width being left between the old work and the new, to permit vessels to enter the port.

In May, 1889, operations on this new work were commenced, and up to the close of the fiscal year 300 feet had been constructed.

During the year a commencement was made to extend the talus of stone along the front of the work built under the first contract, it having been found that the bottom was eroding under the action of seas during heavy gales. It may here be mentioned that this breakwater has successfully withstood the force of breaking seas driven by gales travelling at the rate of 54 miles an hour, and also ice shoves from the outer bay, when the ice has been pushed completely over the structure and left remaining thereon to a height of 19 feet.

The depth at low water in the central opening is 18 feet; at the north-east opening, which is 250 feet wide between the end of the breakwater and the Canadian Pacific elevator wharf, the depth is 17 feet; and, after the completion of the length—1,500 feet—now under contract, there will be a depth of 17 feet at the western end, with ample room for steamers and vessels to pass.

The portions already completed have stood extremely well, and their presence has been the means of converting what was formerly an open, dangerous and exposed roadstead into a safe and commodious harbour, and when the works, now in course of construction, shall have been completed, the harbour of Port Arthur will not be excelled by any harbour on Lake Superior.

PORT ELGIN.

Port Elgin is in the County of Bruce and on the east coast of Lake Huron, 4 miles from Southampton and 24 miles from Kincardine.

In 1857 the Government granted \$4,000 to assist a private company in constructing a pier 380 feet in length to reach 13 feet of water.

During the summer of 1882 the construction of a breakwater 600 feet in length was commenced, and two groynes of close pile-work, with slopes of brush and stone, were built, with a view of preventing the washing in of sand into the harbour.

In November, 1884, a contract was entered into for the construction of 950 feet of crib-work to connect the northerly end of the breakwater with the shore, and the work was completed in 1886. A Government dredge was also engaged in removing a considerable quantity of sand.

In 1887-88 an addition of 300 feet in length and 20 feet in width was built perpendicularly to the original landing pier, and a large amount of dredging done to give better access thereto. In 1888-89 this dredging was continued on the bar at

the entrance, to enable vessels with a draft of 12 feet to approach it. A channel 760 feet in length, an average width of 75 feet and depth of 13 feet, was opened in line with the public wharf out to deep water.

PORT HOPE.

Port Hope lies on the north shore of Lake Ontario, 7 miles above Cobourg and 103 miles above Kingston.

The original harbour works consisted of two piers, the eastern extending 600 feet into the lake and the western 480 feet, the width at the entrance being 104 feet, the piers reaching to 13 feet at low water, with a depth of 9 feet only at the entrance to the harbour, which had an area of about 3 acres.

In 1875-76 the western pier was extended 150 feet on a width of 30 feet, and the eastern pier 120 feet, on a width of 40 feet, and the entrance dredged to 13 feet. During the summer of 1882 the work of extending the eastern pier 100 feet was commenced, and a considerable quantity of dredging was also done.

In 1882 a contract was entered into for the construction of a groyne 20 feet in width and 300 feet in length, and the work was completed in 1884, the object of this groyne being to prevent the sand from forming a bar at the mouth of the harbour, and this work was extended a further distance of 200 feet in 1884 and 1885.

During 1888-89, 700 feet of the superstructure of the railway wharf, which was decayed, was renewed, and the work is still in hand.

A large amount of dredging, 45,010 cubic yards, was done during the fiscal year in the old and new harbours to a depth of 10, 12 and 14 feet, and at the entrance to the harbour outside of the piers to a depth of 16 feet.

PORTSMOUTH.

Portsmouth is situated on Lake Ontario; 2 miles west from Kingston.

At the commencement of the fiscal year nearly 300 feet of new superstructure had been connected with the old work and about 200 feet was ready for floor timbers. At the close of the last fiscal year about 500 feet of the superstructure was finished, nearly 400 feet having been planked and 100 feet being ready for planking. The outer corners and the end have been protected with elm sheathing and walings. Elm fenders have also been placed for a considerable distance on both lake and harbour faces of the work.

THE RIDEAU—NORTH BRANCH.

Two dredges—the “St. Louis” and the “Queen”—with attendant stone lifter, were engaged during the fiscal year in deepening the channel of the north branch of the Rideau, from the Rideau Canal up to the village of Kemptville. The lower part of the channel was soft digging, and the “St. Louis” removed 8,160 cubic yards of sand, but as the river was ascended the character of the bottom changed to large-sized boulders, and beds of small boulders firmly packed. The “St. Louis” not proving strong enough for such heavy work, the “Queen” was placed in the channel, and with the assistance of dynamite progress was made with the work of obtaining a depth of 7 feet at low water in the channel.

RIVER AUX PUCE.

The River aux Puce flows through the County of Essex, and empties into Lake St. Clair, about 20 miles to the east of Windsor.

In September, 1888, a contract was entered into for the construction of 350 feet of close sheet-piling at the mouth of this river, 200 feet to be driven on the east side and 150 feet on the west side, to form a channel 40 feet in width, and at the close of the fiscal year the work was well under way.

RIVER KAMINISTIGUIA.

This river empties into Thunder Bay, Lake Superior, to the westward of Port Arthur.

In 1884 dredging was commenced on the shoal, off the mouth of the river, which prevented the large craft on the Upper Lakes from entering, a channel 3,700 feet in length being dredged on the line of the range lights.

In 1886 dredging was commenced in the river, and has been continued from year to year, so that the largest steamers can now reach the elevators at Fort William without difficulty.

RIVER OTTAWA.

Improvement of Channel between Pembroke and Petewawa.

Between Pembroke and the mouth of the Petewawa there existed several shoals which obstructed navigation.

In the fall of 1883 the work of removing the shoal at the Little Narrows, which are situated $5\frac{1}{2}$ miles above Pembroke, was commenced, and completed in the summer of 1885. There are now 8 feet of water in the channel, which is 150 feet in width. In 1886 Crab Island, which greatly impeded navigation, was removed to 1 foot below low water.

In 1887 dredging on the shoals below the mouth of the Petewawa was commenced on the 1st August and continued till the 28th October, during which time 1,560 cubic yards of rock, boulders and gravel were removed, and 29 buoys placed in the channel.

The dredge was ordered to work in 1888 at a sand shoal which obstructed the channel from Lake des Allumettes to the Culbute Lock. The work was commenced on the 28th July and continued till 1st October 1888, during which time 2,044 cubic yards of sand and gravel were removed. This channel has now 8 feet of water and a width of 75 feet.

RONDEAU.

Rondeau is situated at Pointe aux Pins, on the north shore of Lake Erie, 104 miles above Port Colborne.

Pointe aux Pins projects into the lake, and encloses a natural basin of about 6000 acres in extent. The communication between the basin and the lake is over a sand bank 120 feet broad, some parts of which are above the level of the water. In 1844 a breakwater was built at Rondeau by the Government, and in 1851 the harbour was sold to the Rondeau Harbour Company for \$8,000, on condition that the works should be kept in an efficient state of repair; but this stipulation being wholly neglected, possession was resumed by the Government on 26th July, 1856, when the works were repaired.

In January, 1871, a contract was entered into for building the piers, enlarging the channel, deepening the basin, and other works required for a harbour of refuge; which works were carried to completion in four years. They consisted of two parallel piers, 783 feet in length, 250 feet apart, placed north and south, having a depth of 15 feet of water between them, a breakwater 225 feet in length, and dredging an area of 10 acres in the inner basin to a depth of 15 feet.

In 1877 an examination was made of the openings caused by several storms in the sand banks protecting the harbour, when it was found that although the depth of water in the channel had not decreased, the inner basin had been partially filled by sand carried in through the breaches in the beach.

In 1881 a contract was entered into for the construction of 2,000 feet of pile protection work on the beach to the westward of the entrance. This work was completed in 1883 and proved highly successful.

In 1883-84 a further amount of dredging was done to enlarge and deepen the basin immediately within the entrance from the lake, and extensive repairs were made to the eastern pier and breakwater in front of the lightkeeper's dwelling, and from time to time repairs to both the eastern and western piers have been made.

In 1888-89 the ends of both the pier entrances were rebuilt from water level, and a portion of the west pier was replanked.

SAULT STE. MARIE.

Sault Ste. Marie, in Algoma County, is situated at the head of St. Mary's River which connects Lake Huron with Lake Superior.

In 1871 some dredging was done at the wharf, to permit steamers drawing 10 feet to reach it. In 1884-85 the work of dredging a shoal of sandstone rock, off the steamboat wharf, so as to give a depth of 16 feet was commenced, but it was decided to obviate the necessity of dredging the solid rock by extending the wharf 150 feet into the river, and a contract was entered into with that object in 1887. The work was successfully carried out and completed in June, 1889, the depth of water along the outside face of the wharf varying from 14 feet 6 inches to 18 feet.

SOUTHAMPTON.

Southampton, in the electoral district of North Bruce, is situated at the mouth of Saugeen River, which empties into Lake Huron 143 miles above Sarnia.

The harbour is formed by the eastern breakwater of the Chantry Island harbour of refuge, and by a landing pier 850 in length and 30 feet in width, with a depth of water of 14 feet at the outer end. The last extension was built in 1884-85, but owing to great damage done to it by fire it had to be rebuilt from the water level in 1888-89, and this work was satisfactorily completed. Dredging was done in 1886-87 at the end of the landing pier, and also along the face of it to give a depth of 15 feet.

Dredging was done along the inner side of the wharf to a depth of 10 feet below low water in Lake Huron.

SUMMERSTOWN.

Summerstown, County of Glengarry, is on the north side of Lake St. Francis, 10 miles below Cornwall.

A wharf having a length of 130 feet and a width of 20 feet, with a shore connection of 85 feet in length, was built at Summerstown in 1886-87.

This wharf has a height of 11 feet at the outer side, and since the channels from the main channel of the St. Lawrence have been deepened vessels and steamers drawing 7 feet of water can approach this wharf.

In the fall of 1888 a warehouse 24 feet by 30 feet was constructed, for the accommodation of the public.

TORONTO HARBOUR.

The harbour of Toronto is formed inside of the island, and has its principal entrance from the westward.

In 1788 the harbour was described to be nearly two miles in length from the entrance on the west, to the isthmus between it and a large morass to the eastward. The breadth of the entrance was about half a mile, but the navigable channel for vessels was only 1,500 feet, having a depth of from 18 to 21 feet of water.

In 1832 Bouchette stated that the peninsula, now Toronto Island, was an extraordinary formation, being a narrow slip of land, in several places not more than 180 feet in breadth, but widening towards its western extremity to nearly a mile.

In 1833 changes in the state of the harbour were apparent, and the necessity for its preservation engaged the attention of those interested in its maintenance and improvement, who viewed with alarm the changes which had taken place in the peninsula, the encroachment of the shoal from Gibraltar Point northward and the narrowing of the entrance to the harbour. No action was taken, and in 1847 it was reported to the Department of Public Works that the entrance had narrowed to 250 feet, the bar having increased northwardly 280 feet in *seven* years.

In 1850 the harbour was put in commission, and early in 1852 it was reported that from the observations made and soundings taken during twenty years it was ascertained that the bar had advanced northwardly across the entrance at the rate of 19 feet yearly, and that the available width of the channel was scarcely 200 feet.

In 1853 an opening was made during a storm through the narrow beach at the eastern end of the harbour, and though it closed again in a short time afterwards, and attempts were made to give permanence to the beach, the whole was swept away, and the eastern entrance was formed, and in that year it was suggested that its improvement should be undertaken, for the purpose of saving time to vessels arriving from or departing to the eastward; and that there would be a tendency, by reason of the current created, to keep the harbour open later in the fall, and ensure an earlier opening in the spring.

In 1859 the harbour master reported that the harbour was bounded on the south by an island, with a navigable channel east and west of it; that in the eastern channel there was a depth of 8 feet at low water, and if properly buoyed might be navigated at night. In 1860 the western channel was dredged to a width of 400 feet, and an average depth of 12 feet. In 1862 the eastern entrance had increased to half a mile in width, and a bar had formed which had shoaled the water.

Between 1874 and 1880 the sum of \$49,120.90 had been expended, principally in increasing the width and depth of the western entrance, and a certain amount of blasting for the removal of solid rock was executed.

In 1881 an examination of the harbour was made by the late Mr. Jas. B. Eads, C.E., who submitted a carefully prepared report, in which he advised the closing of the eastern entrance, and the construction of works at the western entrance, to obtain and maintain a depth of 18 feet at low water; but before any action could be taken on these suggestions the marshes bounding the eastern side of the harbour, and the whole of the southern shore of the island, were damaged to such an extent as to necessitate a complete departure from the plans prepared by Mr. Eads, and attention had to be paid to the protection of the eastern side of the harbour, and the preservation of the eastern portion of the island, where it was the narrowest, and through which several breaches had been made. In 1882 work for the protection of the harbour, extending from the Don southwardly to Fisherman's Island, and for the protection of the island, over a length of 6,500 feet, were commenced, and were brought to completion in 1885.

In May, 1889, a contract was entered into for improving the eastern entrance, the works required consisting of the dredging a channel 300 feet in width to a depth of 12 feet below low water, the construction of protection works on either side of the new channel, and the continuation and completion of the harbour protection works on the eastern side of the proposed entrance—extending from Fisherman's Island westwardly to a junction with the channel works; and at the close of the year dredging was well under way.

MANITOBA.

THE RED RIVER.

The Red River empties into Lake Winnipeg 45 miles below the city of Winnipeg, and 21 miles below the town of West Selkirk, which is the place of transshipment in connection with the trade to and from Lake Winnipeg, and is called the head of navigation, though craft may ascend the river to the foot of St. Andrew's Rapids, which extend over a distance of 10 miles, are five in number, and have a total fall of 15 feet. In some of the rapids the water does not exceed 1 foot in depth, at extreme low water, and thus navigation is effectually obstructed between Selkirk and Winnipeg, except at high water, and even then the water must be higher than ordinary high water.

At a point 18 miles below Selkirk the river is divided into branches, known as the East, Centre and West, the latter having, in the interests of navigation, been adopted as the channel, and in it the dredging done by the Department during past years has been carried on, a passage having been made through the bar at its mouth, and also through the shoal at the "Forks," or where the river spreads and divides into the three channels referred to.

During the past summer the water was very low in the lake and river, and though boats had free access to the lake, yet the want of width in the channel was found to be a drawback in rough weather to the passage of steamers with barges in tow, and a width of at least 300 feet is required.

At present the fish and lumber industries are those which are being developed, and their growth during the past two years has been extensive, five saw mills being in operation at different points on the lake, with an annual output of—say, ten millions of feet of lumber—principally spruce; whilst three companies, with establishments fully equipped, with freezers, &c., are engaged in the fisheries at Selkirk and on Lake Winnipeg, and it is stated that their business is quite as important as that of lumber, and is being carried on in a most vigorous manner.

There are engaged in the lake trade in the carrying of lumber, fish, supplies, &c., twelve steam vessels, with barges, the gross tonnage of which amounts to 1,471 tons.

The dredging done by the Department in the river below Selkirk, and at its mouth in the lake has been a great feature in the development of trade, for without it, navigation would have been closed.

THE WHITE MUD.

The White Mud empties into Lake Manitoba at its southern end, about 9 miles north of Westbourne, in the County of Marquette, Manitoba. Westbourne is the point of transhipment to and from Lake Manitoba, on the Manitoba and North Western Railway which has a junction with the Canadian Pacific Railway at Portage la Prairie, 17 miles distant. From Westbourne to Winnipeg the distance is 73 miles.

During the fiscal year the channel was improved between Totogan and McArthur's Landing, and the bars which obstructed the navigation of the river were removed to such a width and depth as to permit the boats to pass freely, after which work was resumed on the bar at the mouth of the river.

During the winter necessary repairs were made to the plant, which on the opening of navigation, was placed to widen the channel between Totogan and McArthur's, after the completion of which work in the channel through the bar at the mouth was resumed, and was being proceeded with at the close of the fiscal year.

The trade on Lake Manitoba is principally in the movement of lumber, railway sleepers and cordwood, and but one steamer is engaged in such traffic, connection with the Hudson's Bay Company's forts and others, being carried on by sail boats.

Had not dredging been done at the mouth and in the river itself, navigation would have ceased, owing to the extreme lowness of the water which has prevailed during the past two years.

BRITISH COLUMBIA.

BIGG'S PORTAGE.

A small neck of land, known locally as Bigg's Portage, lying due west from Nanaimo, separates the Nanaimo flats from Northumberland Channel. For the purpose of facilitating the carrying of produce, etc., to Nanaimo, by the settlers living along the coast and on adjacent islands, a small channel was opened in 1887 through the Portage. During 1888-89 this channel was widened and deepened, thus increasing its usefulness.

THE COLUMBIA.

The portion of the Upper Columbia affected by the works executed during the past year lies south of the Canadian Pacific Railway, between the little town of Golden, near the mouth of the Kicking Horse, and the head of steamboat navigation in the Lower Columbia Lake, a distance of about 100 miles following the sinuosities of the river, which is navigable for stern-wheel steamers of light draught from the middle of May to the middle of September, but this period of navigation is not how-

ever continuous over the length of the river referred to, as much depends upon the snow fall, which if light compels the steamers to make their landing further down the river as the season advances.

The river varies in width from 60 to 150 feet; in the narrowest parts the water is deeper than where wider, where side channels and sloughs are formed.

At present there is but one steamer—owned by the Kootenay Mail Line plying on the river, which carries passengers, mails and supplies for the numerous mining camps and settlements along the Columbia and Kootenay valleys, consuming three days to reach the lake.

With the amount appropriated a channel has been scraped through the salmon beds just below the lower lake; stone and brush dams have been built across the ends of all side channels and sloughs working down stream; wing-dams have been constructed in the widest and shallowest parts and at bends, for the purpose of confining the water and causing scour, the total length of brush dams secured with rocks and piles amounting to 415 feet. Many snags and other obstructions were removed.

THE COQUITLAM.

The source of the Coquitlam is Coquitlam Lake, whence it flows southwardly and empties into the Fraser on its northern side, about 5 miles above New Westminster. The river is not navigable for any distance from its mouth, except for canoes being very rapid.

Owing to jams and accumulations of trees and drift-wood, the river overflowed, its banks and damaged the adjacent lands, and with the amount appropriated these jams and accumulations were removed with satisfactory results.

THE DRY DOCK—ESQUIMALT.

During the year the dry dock at Esquimalt has been fully occupied. Two of Her Majesty's ships, the "Cormorant" and the "Icarus," the U.S. lighthouse tender "Margarita," one ship, three barques, one schooner and ten steamers having been docked and repaired therein.

The electric lighting apparatus was completed, and proves to be a necessary and useful adjunct to the dock.

A lathe and drill for repairs have been set up, and a small centrifugal pump substituted for the auxiliary and drainage pump supplied with the pumping machinery, which was found to be both uncertain and unsatisfactory in its working.

Additional latrines have been built for the accommodation of the officers and crews of ships in dock, and proper houses for the fire-hose carts have been erected on each side of the dock.

Owing to galvanic action caused by the sea water, the lower ends of the pump rods were almost eaten or corroded away, and new rods, completely sheathed with brass and supplied with brass nuts, have been substituted.

The dock and premises are in excellent order and repair.

THE FRASER.

The sand banks at the mouth of the Fraser extend about 5 miles into the Straits of Georgia. According to the old admiralty charts two channels formerly existed through these banks, the course of one being nearly west, and the other leaving the first about 2 miles from the mouth of the river, passing to the south and thence west to the straits. In time the north channel filled, leaving the tortuous south channel the only entrance to the river. After a lapse of years it was found that a deepening of the north channel was taking place, and in 1886 works with the object of improving this channel were commenced, and have been steadily carried on.

The range of tide on the sand banks averages $12\frac{1}{2}$ feet, whilst the range in the river at 2 miles from its mouth is about nine feet. The current across the banks at strong ebb runs from $2\frac{1}{2}$ to 3 miles an hour, whilst during the periods of freshets it is increased to 5 miles per hour.

In the fall of 1886 a submerged dam, 2,000 feet in length, was commenced across the northern end of the south channel, for the purpose of closing it entirely, and as the work proceeded it was found that perceptible effects in deepening the north channel were being experienced. During 1887 a further length of 1,900 feet of dam was proceeded with, with the hope that the full course of the current would be deflected and pass through the north channel, but this was only partially realized, as the current showed an inclination to break away to the north of the middle ground.

During 1887 it was decided to place a dam on the north side of the north channel to meet the current going in that direction; to place four dams *in echelon* on the south side to deflect the current into the main channel, and to extend the south dam westwardly.

These works have been successful in obtaining the object desired, and the north channel has been both straightened and deepened, and has become the only entrance to the river, and it is anticipated that there will soon be a continuous depth of 19 feet at low water spring tides, through the banks.

This improvement in the direction and depth of the channel has been felt at New Westminster, as proved by the returns from the Custom house for the fiscal year ended 30th June, 1889, which show that 274 steamers and sailing vessels engaged in the coasting trade, aggregating 128,458 tons, entered, and 371 steamers and sailing vessels, aggregating 128,308 tons, departed during the year; whilst of sea-going vessels, ten arrived, with a total of 5,798 tons, and twelve departed, with a total of 6,974 tons, during the same period. In the previous year only four vessels entered seawards.

HARRISON RIVER.

Harrison River is the outlet of a large lake of the same name, which empties into the north side of the Fraser about 50 miles above New Westminster. On the south shore of the lake are hot sulphur springs, near which a large hotel has been erected and a town laid out, and a steamer plies to and fro between the springs and New Westminster.

The Canadian Pacific Railway crosses the river with a wooden bridge, 971 feet in length, with draw openings to admit the passage of vessels and craft into and out of the lake, but no provision was made for guiding such vessels through the draw, and for that purpose a number of piles have been driven in groups of 3 which have had the desired effect.

NICOL ROCK.

The harbour of Nanaimo is situated on the east coast of Vancouver Island, distant 73 miles from Victoria, by which it is connected by rail, and is important as the centre of the coal mining industry of the Province.

Three companies are at present in full operation, shipping coal from the port—the Vancouver Coal Company from their wharves in Nanaimo harbour proper, the Messrs. Dunsmuir & Sons, of the Wellington Colliery, from Departure Bay, 5 miles from Nanaimo, and the East Wellington Colliery, about midway between Nanaimo and Departure Bay.

Nicol Rock, lying about 450 feet north-west from the wharves of the Vancouver Coal Company, and about 120 feet east of their ballast wharf, was a source of danger to shipping, and a great impediment in the harbour, when the number and size of the vessels frequenting the harbour are taken into account, during the past year 419 steamers and 63 sailing vessels loading at the wharves of the Vancouver Coal Company, the shipments amounting to 248,070 tons.

The rock is composed of the grey sandstone which overlies the coal, and is much broken on top, and the strata have been found alternately hard and soft, thereby adding much to the difficulty of drilling and of breaking the rock up small enough for dredging.

The highest point was, originally, about 3 feet below low water mark, and 19 feet below high water, spring tides, which have a range of 16 feet. Operations

for the removal of the crown of this rock were commenced in November, 1887, and the first blast was exploded the 20th February following, since which time the work has been actively carried on. Up to the 30th June last about 4,110 lbs. of 75 per cent. dynamite have been used, and more than two-thirds of the area of the rock, with the 16 feet contour line, has been broken up, and 1,800 tons of material have been dredged and landed.

This work cannot be completed until 1891.

THE NICOMEKEL.

The Nicomekel lies to the southward of the Serpentine, and has its source in Township 11, and is a tidal stream, affording a convenient outlet for the produce from farms along its whole length.

For several years past the several amounts which were authorized were expended in the removal of snags and other obstructions to navigation up as far as the Clover Valley Road, and in opening a canal or "cut off" across the big bend in Section 36, Township 1. These improvements have proved to be of the greatest benefit to the settlers, by enabling small steamers and sloops to pass up the river to the above mentioned road.

During the past fiscal year a small amount was expended in the removal of snags and cutting brush along the banks, to the eastward of the Clover Valley Road, thus opening the river for small boats and scows nearly up to Langley Prairie, and for the completion of this work a further sum is required.

THE SERPENTINE.

The head waters of the Serpentine are situated in the north-west corner of Township 8, district of New Westminster, about three miles south of the Fraser; thence flowing south and south-west it empties in Mud Bay, in Township 1.

It is affected by the tide for some distance east of the coast meridian road, where it is not more than 20 feet in width. In consequence of its extremely tortuous course, the storm water has not time to get away with the ebb tide before the flood tide sets in, and the adjacent lands, especially in Townships 2 and 8, are for a great part of each year under water, and therefore unfit for cultivation. For the purposes of relief a ditch, 9 feet wide on the top, 3 feet wide on the bottom, and an average depth of 3 feet, was opened during 1887-88, from a point on the left bank of the river, in the N.E. $\frac{1}{4}$ of Section 13, Township 2, to the S.W. $\frac{1}{4}$ of Section 12, in the same township, a distance of about $1\frac{1}{2}$ miles. During 1888-89 this ditch was enlarged to double its former capacity, and has proved of much benefit.

THE SOMAS.

This river rises in the northern part of what is known as the Alberni Valley, on the western side of Vancouver Island, and flows southwardly for a distance of about 20 miles through the valley, and empties into the Alberni Canal, an inlet of Barclay Sound, which is an arm of the Pacific Ocean.

The settlement on the Somas can be reached by water from Victoria *viâ* the Straits and Cape Beale, and by waggon road from Nanaimo, which leaves the east coast of the island near the mouth of Englishman's River, and strikes directly across country, climbing over the height of land, 1,100 feet above the sea. The distance from Victoria to Alberni by sea is about 140 miles, and by land 130 miles, 78 of which are covered by the Esquimalt and Nanaimo Railway.

During the past year 47 snags were removed from the channel of the river, and many overhanging trees were cut away between the mouth and the landing, which have increased the facilities for navigation; and the remains of an old mill dam near Sproat's Lake, which caused the adjoining lands to be overflowed, were removed.

VICTORIA HARBOUR.

The entrance to the harbour of Victoria is very narrow, with a sharp turn after passing the lighthouse. This turn was the cause of much difficulty to vessels, especially large steamers, entering the harbour during the prevalence of strong south-west winds, and was due to the existence of a shoal extending from Shoal Point,

which for a long time was supposed to be composed of solid rock, but in fact of a compact mass of boulders. It having been decided to operate on this shoal, iron pipes fitted with cast iron shoes were driven through and between the boulders with a small pile-driver to the required depth, and about 3 feet apart. These tubes were loaded with dynamite and exploded, after which a large harrow or rake, weighing about two tons, was dragged over the bottom, and then the dredge "Pacific" was able to work freely through the shoal.

The work done during the year has resulted in deepening and straightening the channel, and soon the "red" buoy marking the right side of the channel coming in will be shifted, when there will be a channel 300 feet in width, with an easy turn, and an almost straight course from the lighthouse to the wharves in front of the city, having a depth of not less than 14 feet at low water, spring tides, which have a range of 10 feet, there being at the entrance to the harbour a depth of 21 feet at high water neap tides, 23 feet at ordinary spring tides, and 24 feet at the extraordinary tides which occur in December.

SURVEYS AND EXAMINATIONS.

During the year surveys and examinations were made at the undermentioned localities; and—with some exceptions—plans, reports and estimates have been submitted:—

Naufrage,	King's Co.,	P. E. I.	Oyster Ground,	Gloucester Co.	N.B.
Tignish,	Prince Co.	do.	Nerepis River,	King's Co.	do
Belle Creek,	Queen's Co.	do.	Washademoak,	Queen's Co.	do
Dunn's Lake,	Antigonish Co.,	N. S.	Coles Point,	Westmorland Co.	do
Georgeville	do	do	Pointe du Chêne,	do	do
Monk's Island	do	do	Pré d'en haut,	do	do
Belfry River,	Cape Breton Co.,	do	Longueuil,	Chambly Co.	P.Q.
Big Lorraine	do	do	Cap à l'Aigle,	Charlevoix Co.	do
Cow Bay	do	do	Murray Bay	do	do
East Bay	do	do	St. Fidèle	do	do
Sydney, C. B.	do	do	Roberval & Métabetchouan,	Chicoutimi Co.	do
Fox Harbour,	Cumberland Co.	do	Amherst, Magdalen Islands,	Gaspé Co.	do
Joggin's	do	do	Cape Cove	do	do
Minudie	do	do	St. Maxime de Mont Louis	do	do
Port Greville	do	do	Ste. Anne des Monts	do	do
Sand River	do	do	Rivière l'Assomption, L'Assomption Co.	do	do
Tignish	do	do	St. Laurent, Ile d'Orleans, Montmorency Co.	do	do
Two Rivers	do	do	Rivière des Beaudettes, Nicolet Co.	do	do
Barton,	Digby Co.	do	Gatineau,	Ottawa Co.	do
Little River	do	do	Hull	do	do
River Sissiboo	do	do	Pond Creek	do	do
Rossway	do	do	Kippéwa Lake,	Pontiac Co.	do
Trout Cove	do	do	Cap Santé,	Portneuf Co.	do
Musquodoboit,	Halifax Co.	do	Rimouski Pier	Rimouski Co.	do
Three Fathom Harbor	do	do	Longue Pointe & Boucherville,	River St. Law.	do
Summerville,	Hants Co.	do	Coteau Landing,	Soulanges Co.	do
Canada Creek,	King's Co.	do	Pointe du Lac,	St. Maurice Co.	do
Hall's Harbour	do	do	Rivière Meekinac	do	do
Kingsport	do	do	do St. Maurice	do	do
Morden	do	do	do du Nord,	Two Mountains Co.	do
Ogilvie	do	do	Pointe à Valois,	Vaudreuil Co.	do
Pickett's Pier	do	do	Indian Point,	Algonia Co.	Ont.
Victoria	do	do	Thessalon,	do	do
Lunenburg,	Lunenburg Co.	do	Kingsville,	Essex Co.	do
Port Medway,	Queen's Co.	do	Texas Landing	do	do
Barrington,	Shelburne Co.	do	Kingston Harbour,	Frontenac Co.	do
Barrington Passage	do	do	Meaford,	Grey Co.	do
Jones' Harbour	do	do	Thornbury	do	do
Jordan Bay	do	do	Picton,	Prince Edward Co.	do
Green Harbour	do	do	Lake Scugog,	Victoria Co.	do
Little Harbour	do	do	Des Chênes Bridge,	Ottawa River.	do
Louis Head	do	do	Ottawa River	do	do
Negro Island	do	do	West Selkirk, Lisgar,		Man.
Port la Tour	do	do	Kipp Bridge,		N.W.T.
Roseway Beach	do	do	Old Man's River Bridge		do
Round Bay	do	do	Columbia River, Kootenay,		B.C.
Big Bras d'Or, north side,	Victoria Co	do	Burnaby Shoal, New Westminster		do
Coverdale,	Albert Co.	N.B.	New Westminster	do	do
Two Rivers	do	do	Courtney, &c., Rivers, Vancouver		do

DREDGING.

THE "ST. LAWRENCE."

This dredge commenced work for the year on the 3rd July, 1888, at Little Glace Bay, C. B. This bay, situated between Table and McPherson's Heads, was formerly a cove, into which a small stream emptied, and owing to its location was utilized as a shipping point for the products of the collieries of the Little Glace Bay and Caledonia Coal Company. Sandflats and shallow water extend for a distance of $\frac{3}{4}$ of a mile from the shore, and through them a narrow channel has been opened, to permit steamers and sailing vessels to reach the loading piers. This channel fills with sand and kelp, and to such an extent that the entry of vessels was to a certain extent stopped. For the removal of these obstructions dredging was commenced in 18 feet at low tide, about 180 fathoms from the end of the pier, and continued seawards for a length of 100 fathoms, with a width of 62 feet, and an average depth of 21 feet, and for a further length of 75 fathoms, with a width of 85 feet and a depth of 21 feet at low water; 15,213 cubic yards of sand, mud, clay, stone, boulders, kelp, logs and wreckage having been removed up to the 28th September.

As this channel is merely a cut in the bottom, without any protection against stones or scouring, it is only a question of time when it will again fill up and require re-dredging.

Neap tides rise $2\frac{1}{2}$ feet and springs $3\frac{3}{4}$ feet.

On the 13th October work was commenced in the River Restigouche, at the "Traverse," between Dalhousie and Campbellton, N.B., and continued until the 8th November, up to which date a cut 75 fathoms in length, 60 feet in width, had been made, to a depth of 15 feet at low water, and 4,900 cubic yards of hard, fine sand removed.

To open the channel required at this place to a depth of 15 feet at low water will require the services of this dredge for several seasons.

Neap tides rise 6 feet; springs, 9 feet.

A small amount of work was done in deepening between the wharves at Dalhousie for a winter berth for the Steamer "Admiral."

On the 18th November work was again taken up in deepening the approach to the market wharf, Pictou harbour, and continued until the 6th December, when the dredge was sent to winter quarters, having made a cut 180 fathoms in length, 60 feet in width, and 15 feet deep at low water, and removed 3,850 cubic yards of mud.

During the winter the dredge was overhauled and needed repairs made to the hull and machinery, and on the 27th April, 1889, work was commenced in the Middle River of Pictou, opposite Granton, in removing the point of a shoal that interfered with navigation. A cut 50 fathoms in length and 60 feet in width was made, to a depth of 22 feet at low water, and a second cut 60 fathoms long, and 40 feet wide, to a depth of 21 feet, thus widening, and straightening the channel very materially. The materials removed were mud and hard pan, and up to the 11th May, 3,675 cubic yards were removed.

On the 16th May, moorings were laid and work resumed on the berth for the "Admiral" at Dalhousie, N.B. The object of this work is to enable a steamer to ply later in the season, remain in safety at Dalhousie during the winter, and thus commence its trips earlier in the spring than heretofore.

This berth is 75 fathoms in length, running parallel with the shore, 60 feet in width, and 11 feet deep at low water; and 6,150 cubic yards of mud, clay, boulders, slabs, etc., were removed, and the work completed on the 8th June.

On the 12th June work was resumed on the Traverse, and up to the close of the year a cut 60 fathoms in length, 96 feet in width, had been completed to a depth of 13 feet, and a commencement made on a second cut also 60 fathoms in length,—6,150 cubic yards of sand having been removed.

The total quantity of material removed during the year amounted to 40,026 cubic yards, at an average cost of 39.09 cents per cubic yard.

The sum of \$39,41 was received from the sale of condemned stores, and \$375.00 from the Intercolonial Railway for dredging done at the railway wharf, Pictou harbour, N.S., both of which amounts were placed to the credit of the Receiver-General.

THE CANADA.

At the commencement of the fiscal year, the Canada was engaged at Yarmouth, N. S., in deepening the channel in the harbour near the Lobster rock, and in removing several projecting points from the tortuous and narrow channel, and new beacons formed of clusters of piles were driven to mark the position of the banks. The approach to the wharves in front of the town was much improved. Some dredging was performed at private wharves, for which payment was made.

Neap tides rise 13 feet, spring tides, 16 feet.

The material removed was principally clay and sand, and amounted to 20,092 cubic yards.

Work at Yarmouth closed at the end of October, and on the 31st the dredge arrived at Barrington and commenced the removal of two points in Sherrow's Channel, and in opening a basin off the end of the wharf in course of construction by the Department, 2,520 cubic yards of material having been removed up to 24th November.

Neap tides rise $6\frac{1}{2}$ feet, springs $8\frac{1}{2}$ feet.

The "Canada" wintered at St. John, N.B., and before the opening of navigation in the spring extensive and much needed repairs were made to the vessel, engines and machinery. On the 26th April, 1889, work was resumed in the channel at Barrington, N.S., and a further quantity of 9,225 cubic yards of clay and sand were removed up to the 30th June.

The total quantity removed by this dredge during the year was 31,837 cubic yards, at a cost of $37\frac{3}{10}$ cents per cubic yard.

The sum of \$26.38 was received for private dredging, and deposited to the credit of the Receiver-General.

THE "NEW DOMINION."

During the past fiscal year this dredge operated as follows:—On the 1st July, 1888, it was engaged in improving the channel of the Kennebecasis below the village of Hampton, and a depth of 10 feet was obtained by the 2nd July, when the plant was removed down the river, and the channel approach to the draw opening in the highway bridge at Perry's Point was straightened and deepened to a depth of 10 feet.

On 13th July dredging was commenced on the Oromocto Shoals, River St. John and carried on until the 6th October, when a cut 2,350 feet in length, 50 feet wide, and 14 feet deep at low water, summer level, was finished,—30,310 cubic yards of sand having been removed.

The dredge returned to the channel at Perry's Point bridge on the 15th October and remained until 9th November, when the channel, 480 feet in length, 45 feet in width and 10 feet in depth, was completed, and a total of 11,340 cubic yards of sand and mud removed.

After necessary repairs had been executed, the dredge was placed to work for the corporation of the city of St. John in deepening and improving the berths for vessels at the Anchor Line wharf (so-called), in the harbour of St. John. Dredging commenced on the 8th May and was concluded on the 26th June, when a cut 200 feet in length and 80 feet in width was made alongside of the wharf. At 50 feet from the inner end rock was struck in 16 feet at low water, and 80 feet from the wharf at the outer edge of the cut, and 30 feet from the inner end of the wharf, the rock was struck at 12 feet. The depth of cutting averaged about $6\frac{1}{2}$ feet, and 4,695 cubic yards of mud and silt were removed.

The total quantity of materials removed by this dredge was 46,345 cubic yards, at a cost of $21\frac{23}{100}$ cents per cubic yard.

The sum of \$15 was received from the sale of condemned stores, and placed to their edit of the Receiver General.

THE "PRINCE EDWARD."

The whole of the summer of 1888 was spent in repairing this dredge and the attendant scows. The hull was found to be in a bad state, the deck and side planking being rotten, and after the removal of which the side keels, several of the timbers, beams, and anchor houses were broken, and so decayed that it was necessary to remove them. Two new keels and keelsons, and several new timbers and beams were put in and the hull new planked, the bottom with $3\frac{1}{2}$ -inch hardwood, the sides with 6-inch southern hard pine, and the deck with 4-inch spruce. New deck combing's were inserted, and the deck house newly sheathed and the roof covered with canvas. The hull was caulked, covered with yellow metal up to the water line, and all wood work was painted. The engines, boiler, machinery and gearing were overhauled and repaired. Three scows were caulked, sheathed and repaired, and the dredge was launched on the 7th, and the scows on the 22nd and 27th November.

As winter had set in the plant was placed in winter quarters, and remained until 17th April, 1889, when it was taken to Red Point, on the East River, 7 miles above Charlottetown, where it was employed for 14 days in deepening in front of the wharf at that place to 12 feet at low water, and a satisfactory berth was completed in which vessels could lie and load at the wharf, 4,719 cubic yards of mud having been removed.

Between the 1st and 21st May the dredge was employed in deepening around and in front of the wharves of the Steam Navigation Company, in the harbour of Charlottetown, removing 7,668 cubic yards of mud. From around the Connolly's estate wharf, 5,343 cubic yards of mud were removed up to the 10th June; at Peake Bros & Co.'s wharf, 5,355 cubic yards of mud were dredged up to 24th June; and between the 24th and 30th June, the end of the fiscal year, 1,155 cubic yards of mud had been taken away from around the P.-E. I. Railway wharf, the work being proceeded with during the present fiscal year.

The dredging at all the above-named wharves was with the view of obtaining a depth of 20 feet, where possible, to permit a larger class of vessel than heretofore to lie and load or discharge cargo.

The total quantity of materials removed by this dredge during the portion of the year it was employed amounted to 24,240 cubic yards, at an average cost of $63\frac{9.5}{100}$ cents per cubic yard.

The sum of \$1,525 was received for the dredging done at the wharves in Charlottetown harbour, and placed to the credit of the Receiver-General.

THE "GEORGE MC KENZIE."

On the 3rd July, 1888, the work of this dredge for the fiscal year, commenced at McNair's Cove, Antigonish County, N.S., in dredging a foundation for the reconstruction of a portion of the wharf at that place. Up to the 12th, 1,725 cubic yards of sand, gravel, stone and logs were removed, when, during a severe storm, the place being exposed, and shelter not to be obtained, the dredge sank at her moorings.

After much trouble the dredge was raised and taken to Port Hawkesbury, and placed on the Marine Railway, when it was found that extensive repairs were required to make good the damage which had been done.

These repairs took until 15th October to complete, when the plant was towed to Bayfield, Antigonish County, and commenced dredging around the wharf at that place, to enable the contractor to proceed with his work of close-piling. A berth for vessels was dredged at the end and sides of the wharf to 12 feet at low water; also a basin inside of the "L" or return at end of the wharf, the work being completed on the 31st October, up to which date 1,710 cubic yards of sand and gravel had been removed.

On the 1st November, 1888, the dredge arrived off Arisaig, Antigonish County, in a storm, for the purpose of deepening and preparing the foundation for the works in progress for extending and repairing the wharf at that place. Owing to the nature of the storm, the exposed and dangerous coast, and want of shelter, the plant had to be taken to Port Hawkesbury, the nearest point of safety, where it was placed in winter quarters.

Between the 10th and 30th June the work of preparing the foundations for the wharf at Arisaig was proceeded with, 900 cubic yards of sand, rock and old timber having been removed up to the latter date.

The total quantity removed during the year was 4,335 cubic yards, at a cost of \$2.57 per cubic yard.

The sum of \$4 was received from the sale of condemned stores, and placed to the credit of the Receiver General.

THE "CHALLENGE."

At the commencement of the fiscal year the "Challenge" was engaged at Kincardine, Ont., in removing the sand, which, brought in from Lake Huron during westerly blows, had accumulated between the piers forming the entrance to the harbour, and in deepening the basin, the whole to a depth of 15 feet below zero, or mean low water level in the lake, removing 6,480 cubic yards of sand.

On the 21st July the plant was towed to Southampton, and remained there until the 12th August in deepening alongside of the wharf at that place to a depth of 10 feet, removing 6,330 cubic yards of clay, hard-pan and boulders.

Dredging was commenced in the harbour of Port Elgin about the 14th August, and was continued until the 27th October, making a channel 760 feet in length and 75 feet in width, and an average depth of 13 feet, in line with the public wharf out to deep water, 19,260 cubic yards of sand and clay having been removed.

The plant was placed in winter quarters at Windsor, and during the spring received a complete overhauling and repair, the scows being strengthened to fit them for service until the completion of the new scows then under construction.

On the 9th May, 1889, operations were commenced at Goderich in opening a channel to a depth of 18½ feet below low lake level, through the shoal off the mouth of the harbour. Dredging was also done inside the harbour at the commercial wharf and along the south pier to a depth of 17 feet, the total amount of work done being 12,000 cubic yards of sand and gravel.

On the 27th June work was recommenced at Kincardine, at the outer end of the piers, for the purpose of removing the materials which had accumulated since the last visit of the dredge in July, 1888, and up to the end of the year 360 cubic yards of ordinary sand had been removed.

The total quantity removed during the year amounted to 44,430 cubic yards, at a cost of 19½ cents per cubic yard.

The dredge and machinery are in good condition. The hull of the tug is very much decayed, and provision will have to be made to provide a new one, into which the present boiler and machinery can be transferred.

THE "NIPISSING."

On the 2nd July, 1888, this dredge was working on the Presqu'Île, opposite Papineauville, in opening a cut through the peninsula from the main channel in the Ottawa into Pentecost Bay. This cut is 1,000 feet in length, 50 feet in width, except at the inner or bay end, where it was made 75 feet in width. A depth of 7 feet at low water in the Ottawa has been carried into the bay. Dredging to 7 feet depth was also done in front of and around the Papineauville wharf to permit the approach of steamers at the lower stages of water in the Ottawa.

This work occupied up to the 8th October, when 42,880 cubic yards of clay, mud, sand and boulders had been removed.

Operations commenced at Pointe aux Anglais on the 12th October, on the boulder shoals in front of the steamboat wharf, and a channel, 100 feet in width and a depth of 7 feet at low water, was opened eastwardly from the wharf to deep water, 2,595 cubic yards of boulders having been removed, the greater number of which were raised by the stone lifter after the dredge had loosened them.

During the winter a new hull was constructed, into which the boiler and machinery, which had been placed in thorough order, were transferred, and on the 24th June, 1889, the plant was towed to St. Placide, where operations were commenced to the westward and in front of the wharf at that place, to increase the area of the

basin and afford more room for the turning and accomodation of vessels. An old wharf which stood in the high water channel, and a serious obstruction to vessels, was removed; and, up to the close of the fiscal year, 270 cubic yards of clay were removed.

The total quantity of materials removed by this dredge during the year amounted to 45,745 cubic yards, at a cost of $17\frac{1}{3}$ cents per cubic yard.

THE "ONTARIO."

At the close of the fiscal year 1887-88 the "Ontario" was operating at Brighton, Ont., in front of and to the eastward of the wharf at that place, and removed several sunken cribs in proximity to the wharf, which were the cause of difficulty and danger to vessels approaching or leaving the wharf. This work was prosecuted until the 3rd August, when a depth of 14 feet was left, and 10,680 cubic yards of mud, gravel and boulders were removed.

The plant was transferred to Port Hope, where operations commenced on the 6th August in the old harbour in cleaning through to the coal wharf to a depth of 10 feet, after which one cut was made in the new harbour to a depth of 14 feet, 5,880 cubic yards of ordinary sand having been removed.

Between the 27th August and 13th September dredging was done between the harbour piers at Newcastle, making a depth of 14 feet at low water in Lake Ontario from the warehouse basin out to deep water in the lake, which necessitated the removal of 4,230 cubic yards of sand and gravel.

On the 14th September the plant was taken to Port Hope, where it remained at work until the 27th October in deepening the entrance to the harbour outside of the piers to 16 feet, and inside the harbour to 14 feet, and 9,430 cubic yards of sand, gravel and mud were removed. Owing to the prevalence of heavy winds much time was lost, as the loaded scows could not be taken to a place of deposit in deep water in the lake.

The plant wintered at Port Hope and the ordinary repairs were made. On the 6th May, work was again resumed at Port Hope, and continued until the 30th June, 1889. The work comprised the deepening over portions of the old or inside harbour to a depth of 10 feet, one cut of 20 feet in width and 925 feet in length extending to the outer end of the Midland lumber wharf, and several shorter ones to complete the inner corner, where, owing to the presence of rock, the depth was limited to 10 feet. The angular corner opposite the harbor storehouse was dredged to a depth of 12 feet, the outer cut being 300 feet in length and 60 feet in width. A channel 450 feet in length and 14 feet in depth was made in the new harbour, extending inwards from the mouth of the piers, the materials removed consisting of sand, mud and gravel, amounting to 14,390 cubic yards, or a total of 29,700 cubic yards.

The total quantity of materials removed during the year amounted to 44,610 cubic yards, at a cost of $13\frac{1}{2}$ cents per cubic yard.

This dredge is in fair condition, but having been afloat for five years it is possible that during the ensuing winter extensive repairs may be found to be necessary. The tug and scows are in good condition and repair.

THE "QUEEN."

At the commencement of the fiscal year this dredge was working on the shoals in the River Richelieu, off Gatiens's and Gendrons's wharves, at St. Antoine, and up to the 12th September a channel 275 feet in length, 60 feet wide and 7 feet in depth, at low water, was made through the upper shoal; and a cut 300 feet in length, 22 feet in width, was made through the lower shoal to a depth of 9 feet. At Gatiens's wharf a cut 545 feet long and 44 feet wide, and at Gendron's wharf a cut 100 feet long and 25 feet wide, were made, to a depth of 7 feet at low water, in the Richelieu, and 9,920 cubic yards of clay, clay and stone, and boulders were removed.

On the 21st September this dredge commenced work in deepening the north branch of the Rideau up to Kemptville, Ont., continuing until the setting in of winter, having only removed 851 cubic yards of materials, principally boulders, the work having proved to be exceedingly hard.

Work was resumed at Kemptville on the 6th June, 1889, and was being prosecuted at the close of the fiscal year, up to which time only 184 cubic yards of boulders were removed, and then only with the assistance of dynamite.

The total quantity of materials removed by this dredge during the year amounted to 10,955 cubic yards, at a cost of $66\frac{1}{11}$ cents per cubic yard.

THE "ST. LOUIS."

At the commencement of the year the "St. Louis" was working at Kemptville, deepening the channel of the north branch of the Rideau to 7 feet, having removed up to the 6th September, 8,160 cubic yards of sand.

On the 17th September this dredge commenced work at Lacolle, on the River Richelieu, in making a loading berth 250 feet long, 50 feet wide, and 8 feet deep at the outer and 7 feet deep at the inner end, alongside of the wharf at that place, removing 1,365 cubic yards of clay and stone, and 100 yards of hard-pan, which had to be broken up with dynamite.

During the winter extensive repairs were made, it having been found that the hard digging at Lacolle had strained the dredging machinery and loosened the fastenings.

On 22nd May, 1889, this dredge was sent to Charlemagne to remove a shoal at the junction of the River L'Assomption with the northern branch of the Ottawa, and to clear the obstructions which had gathered in the channel at that point. Dredging was done to 7 feet at low water in the St. Lawrence, and was in progress at the close of the fiscal year, up to which date 1,350 cubic yards of clay had been removed.

The total quantity of materials removed during the year amounted to 10,975 cubic yards, at a cost of $61\frac{3}{8}$ cents per cubic yard.

THE "OCTOPUS."

With a view of expeditiously and economically removing the deposits of sand and silt, which the Department is called upon to deal with, an experimental dredge was constructed, the principal machinery of which is a centrifugal pump, whereby the sand or other soft materials are pumped directly from the bottom and conveyed away by tubing. At the close of the year it was not sufficiently completed to admit of being put into actual service.

THE STONE LIFTERS.

Stone lifter No. 1 was literally rebuilt during the past winter, and was attached to the dredge "Queen," for the operations of which it rendered great service.

Stone lifter No. 2 was built during the past winter and attached to the dredge "Nipissing." It is a substantial and powerful vessel, and has been found very useful in handling boulders which the dredge could not raise.

THE "WINNIPEG."

This dredge commenced work on the 2nd July, 1888, in the channel at the mouth of the Red River, Manitoba, and remained until the 21st September, during which period it was widened in places and straightened on one side. Owing to the prevalence of high winds, preventing continuous working, the plant was removed to the "Forks," where another cut was made through the shoal, the better to facilitate navigation and to allow a larger volume of water to flow into the west branch. This work was completed at the end of October, when the dredge was placed in winter quarters at West Selkirk.

During the winter extensive repairs were made to the plant, principally on the steam tug and scows.

Early in May further dredging was commenced in front of the town of West Selkirk, north of Morris street, being a continuation of the work of the previous year, and the work was completed on the 10th June, when operations were again commenced at the mouth of the river, and were being carried on at the close of the fiscal year.

The total amount of materials moved by this dredge during the year was 67,720 cubic yards, at a cost of $19\frac{69}{100}$ cents per cubic yard.

THE "PRIESTMAN."

This dredge differs from all the others owned by the Department, consisting as it does of one of Priestman's—hence the name—patent buckets, similar to the clam shell, which is suspended from the end of a movable crane by a chain, and thus is capable of working either in deep or in shallow water, and it was selected for work on the White Mud, a tributary of Lake Manitoba, which is a comparatively shallow stream.

During the fiscal year this dredge worked in the White Mud in removing the bars between Totogan and McArthur's Landing, after which it was removed to the mouth of the river, where the channel was widened.

Repairs having been executed during the winter, work was commenced as soon as the ice had left the river in making another cut, thus widening the channel through the bars below Totogan, and that work was in progress at the close of the fiscal year.

The total amount of materials removed during the year amounted to 19,798 cubic yards, at a cost of $25\frac{48}{100}$ cents per yard.

THE "PACIFIC."

During the past fiscal year the dredge "Pacific" was employed as follows:—

From the 1st to 11th July, 1888, in clearing the entrance to the Graving Dock at Esquimalt. On the 12th operations were commenced in deepening and widening the channel off Shoal Point, at the entrance to Victoria harbour, and were continued without intermission until the 28th February, 1889. Between the 1st March and 1st April operations were carried on on the boulder shoal in Victoria harbour, when the plant was removed to New Westminster and placed to obtain a deep water berth abreast of the wharf of the Royal City Planing Mills Company, remaining there until the 7th May, when the plant returned to Victoria, and resumed work on the boulder shoal, where it remained until the 15th June, when it was laid up for necessary repairs.

The total amount of materials dredged during the year amounted to 28,759 cubic yards, which is about double the amount done last year, and may be accepted as a fair season's work, when the hard and compact nature of the material dredged is considered.

THE "SAMSON."

The snag-boat "Samson" was employed during the year in connection with the works in progress for improving the channel through the sand banks off the mouth of the Fraser; in attending to and placing buoys in the channel, under the charge of the officers of the Department of Marine and Fisheries; and in removing 153 snags and three large timber jams from the Fraser.

During the season effective repairs were made to the hull, boiler and machinery, and the vessel placed in good working order.

DREDGING PLANT.

The dredging plant belonging to the Department is as follows:—

In the Maritime Provinces.

The steam hopper dredge "St. Lawrence."

do do "Canada."

The dipper dredge "New Dominion" and 6 scows.

do do "Prince Edward" and 4 scows.

do do "Geo. McKenzie" 3 scows and one 1 water scow.

Also 5 old scows belonging to the lost dredge "Cape Breton."

In Quebec.

The dipper dredge "Queen," 2 scows, and tug "Sensation."
do "Nipissing," 2 scows and tug "Ottawa."
do "St. Louis," 2 scows, living scow, and tug "Davis."
The sand dredge "Octopus."
Stone lifters Nos. 1 and 2.

Ship Channel, River St. Lawrence.

Six elevator dredges, tugs "John Pratt," "St. James," "St. Francis," "St. Paul," "C. J. Brydges," "Minnie Parsons," "Delisle," three stone lifters, two coal barges, one stone ship, twelve dump scows of 80 yards capacity, five scows of 150 yards capacity, one sounding scow and two flat scows.

In Ontario.

The dipper dredge "Challenge," 2 scows, and tug "Trudeau."
do "Ontario," 2 scows, and tug "Sir John."

In Manitoba.

Dredge "Winnipeg," tug "Sir Hector," and two scows and one coal barge.
Dredge "Priestman," tug "Victoria," and two scows.

In British Columbia.

The elevator dredge "Pacific," scows and tug "Princess."
The snag boat "Samson."

DETAILS of Dredging in the Maritime Provinces

Dredge.	Locality.	County.	NEW BRUNSWICK.		
			Quantity.	Cost of each Work.	Total Cost.
			C. yds.	\$ cts.	\$ cts.
"New Dominion"	Kennebecasis River.....	King's.....	11,340	2,407 63	.....
	Oromocto Shoals	Sunbury.....	30,310	6,435 24	.....
	Anchor Line Wharf.....	St. John.....	4,695	996 81	9,839 68
"Canada".....	Yarmouth	Yarmouth.....	.....	.....	.....
	Barrington	Shelburne.....	.....	.....	.....
"Cape Breton".....	.....	.....	.....	.....	.....
"Prince Edward"	Red Point.....	Queen's .....	.....	.....	.....
	Steam Navigation Co.'s Wharf, Charlottetown	do .....	.....	.....	.....
	Connolly's Wharf, Charlottetown	do .....	.....	.....	.....
	Peake Bros. & Co. do	do .....	.....	.....	.....
	P. E. I. Ry. Wharf do	do .....	.....	.....	.....
"St. Lawrence"	Little Glace Bay.....	Cape Breton.....	.....	.....	.....
	Traverse.....	Restigouche.....	11,050	4,319 78	.....
	Dalhousie	do	6,238	2,438 62	6,758 40
	Pictou	Pictou.....	.....	.....	.....
	Granton	do .....	.....	.....	.....
"Geo. McKenzie"	McNair's Cove.....	Antigonish.....	.....	.....	.....
	Bayfield	do .....	.....	.....	.....
	Arisaig	do .....	.....	.....	.....
			63,633	.....	16,598 08

Dredge.	NEW BRUNSWICK.		NOVA SCOTIA.	
	Quantity.	Cost.	Quantity.	Cost.
	C. yds.	\$ cts.	C. yds.	\$ cts.
"New Dominion".....	46,345	9,839 68	.....	.....
"Canada".....	.....	.....	31,837	11,877 54
"Cape Breton".....	.....	.....	.....	762 98
"Prince Edward".....	.....	.....	.....	.....
"St. Lawrence".....	17,288	6,758 40	22,738	8,888 95
"Geo. McKenzie".....	.....	.....	4,335	11,167 53
	63,633	16,598 08	58,910	32,697 00

for the Year ending 30th June, 1889.

NOVA SCOTIA.			PRINCE EDWARD ISLAND.			Quantity by each Dredge.	Total Expenditure.
Quantity.	Cost of each Work.	Total Cost.	Quantity.	Cost of each Work.	Total Cost.		
C. yds.	\$ cts.	\$ cts.	C. yds.	\$ cts.	\$ cts.	C. yds.	\$ cts.
.....	.....	.....	.....	.....	.....	46,345	9,839 68
20,092	7,495 79	.....	.....	.....	.....	31,837	11,877 54
11,745	4,381 75	11,877 54	.....	.....	.....	Nil.	762 98
.....	.....	762 98	.....	.....	.....	.....	.....
.....	.....	.....	4,719	3,018 09	.....	.....	.....
.....	.....	.....	7,668	4,904 15	.....	.....	.....
.....	.....	.....	5,343	3,417 17	.....	.....	.....
.....	.....	.....	5,355	3,424 85	.....	.....	.....
.....	.....	.....	1,155	738 69	15,502 95	24,240	15,502 95
15,213	5,947 20	.....	.....	.....	.....	.....	.....
3,850	1,505 08	.....	.....	.....	.....	.....	.....
3,675	1,436 67	8,888 95	.....	.....	.....	40,026	15,647 35
1,725	4,443 82	.....	.....	.....	.....	.....	.....
1,710	4,405 19	.....	.....	.....	.....	.....	.....
900	2,318 52	11,167 53	.....	.....	.....	4,335	11,167 53
58,910	.....	32,697 00	24,240	.....	15,502 95	146,783	64,798 03

PRINCE EDWARD ISLAND.		Total Quantity.	Expenditure Dredging.	Superintend- ence.	Total Expenditure.	Cost per Cubic Yard.
Quantity.	Cost.					
C. yds.	\$ cts.	C. yds.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
.....	.....	46,345	9,283 98	555 70	9,839 68	0 21·231
.....	.....	31,837	11,206 75	670 79	11,877 54	0 37·305
.....	.....	Nil.	719 91	43 07	762 98	.....
24,240	15,502 95	24,240	14,627 32	875 63	15,502 95	0 63·956
.....	.....	40,026	14,763 66	883 69	15,647 35	0 39·093
.....	.....	4,335	10,536 85	630 68	11,167 53	2 57·613
24,240	15,502 95	146,783	61,138 47	3,659 56	64,798 03	0 44·14

DREDGE STATEMENT, showing Material Removed at different localities, Total Annual Expenditure on each Dredge, and Average Cost per Cubic Yard.

QUEBEC AND ONTARIO.

DREDGE "CHALLENGE."

Location.	Hard Pan.	Boulders.	Gravel.	Clay.	Clay and Stone.	Sand, Ordinary.	Sand, Fine.	Mud.	—
	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	c. yds.	\$
Kincardine.....	600	2,925	.....	2,805	.....	6,840	.....	.....	6,840
Southampton.....	.....	.....	.....	11,430	.....	7,830	.....	.....	6,330
Port Elgin.....	.....	.....	5,460	.....	.....	6,540	.....	.....	19,260
Goderich.....	.....	.....	.....	.....	.....	.....	.....	.....	12,000
Total.....	600	2,925	5,460	14,235	.....	21,210	.....	.....	44,430
Total annual expenditure, \$8,830.42. Cost per cubic yard, 19 $\frac{1}{2}$ cents.									

DREDGE "NIPISSING."

Papineauville.....	.....	435	.....	20,580	.....	.....	7,620	14,245	42,880
Point aux Anglais.....	.....	2,595	.....	270	.....	.....	.....	.....	2,865
Ste. Placide.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	.....	3,030	.....	20,850	.....	.....	7,620	14,245	45,745
Total annual expenditure, \$7,825.72. Cost per cubic yard, 17 $\frac{1}{2}$ cents.									

DREDGE "ONTARIO."

Brighton.....	.....	4,320	570	.....	.....	.....	.....	5,790	10,680
Port Hope.....	.....	.....	3,530	.....	.....	18,230	.....	7,940	29,700
Newcastle.....	.....	.....	1,545	.....	.....	2,685	.....	.....	4,230
Total.....	.....	4,320	5,645	.....	.....	20,915	.....	13,730	44,610
Total annual expenditure, \$6,059.42. Cost per cubic yard, 13 $\frac{3}{4}$ cents.									

DREDGE "QUEEN."

St. Antoine.....	.....	256	.....	6,016	3,648	.....	.....	.....	9,920
Kemptville.....	.....	805	230	.....	.....	.....	.....	.....	1,035
Total.....	.....	1,061	230	6,016	3,648	.....	.....	.....	10,955
Total annual expenditure, \$7,240. Cost per cubic yard, 66 $\frac{1}{11}$ cents.									

DREDGE STATEMENT, showing Material Removed at different localities, Total Annual Expenditure on each Dredge and Average Cost per Cubic Yard.—*Concluded.*

DREDGE "ST. LOUIS."									
Kemptville.....						8,160			8,160
Lacolle.....	100				1,365				1,465
Charlemagne.....				1,350					1,350
Total.....	100			1,350	1,365	8,160			10,975
Total annual expenditure, \$6,736.32. Cost per cubic yard, 61½ cents.									

APPENDIX No. 6.

REPORT ON DEEPENING THE CHANNEL

BETWEEN

MONTREAL AND QUEBEC,

BY THE

MONTREAL HARBOUR COMMISSIONERS.

APPENDIX No. 6.

REPORT OF THE MONTREAL HARBOUR COMMISSIONERS ON THE
DEEPENING OF THE CHANNEL BETWEEN MONTREAL AND QUEBEC.

Ref. No. 100,885.

HARBOUR COMMISSIONERS OF MONTREAL,
SECRETARY'S OFFICE,
MONTREAL, 13th August, 1889.

SIR,—In compliance with the request contained in your letter of the 25th June, I am directed to transmit herewith a copy of the report made to the Harbour Commissioners of Montreal by their Chief Engineer upon the work of deepening the Ship Channel of the St. Lawrence between Montreal and Quebec during the first half of the last fiscal year, this work having been handed over to the Department of Public Works on the 31st December, 1888.

I have the honor to be, Sir,

Your obedient servant,

ALEXANDER ROBERTSON,

*Secretary.*A. GOBEIL, Esq.,
Secretary, Department of Public Works,
Ottawa.HARBOUR COMMISSIONERS OF MONTREAL,
CHIEF ENGINEER'S OFFICE,
MONTREAL, 31st July, 1889.

SIR,—In compliance with the request of the Secretary of the Department of Public Works, I beg to submit the following report upon the work of deepening the Ship Channel between Montreal and Quebec for the first half of the last fiscal year, or from 1st July to 31st December, 1888, that being the part of the year during which the work was under the charge of the Harbour Commissioners of Montreal.

The work on hand was the deepening of the Ship Channel from 25 feet at low water to 27½ feet at low water. The object kept in immediate view was to bring the increased depth into use before the close of navigation last year. This was accomplished, and the Ship Channel was publicly inaugurated on the 7th November last. At the close of the season's work the condition of the Ship Channel was as follows:—

From Montreal to the head of Cap à la Roche Channel there was not less than 27½ feet throughout, at low water, with 10½ feet on the Flats of Lake St. Peter and at low water of tides, except at the Champlain Point bar, where a slight silting up had taken place.

Through the Cap à la Roche, Pouillier Rayer and Cap Charles Channels there was a depth, varying with the tides, between about 30 and 36 feet when the river is swollen in spring, and between 24 and 30 feet when it is at its lowest in the fall.

Below Cap Charles no dredging had ever been done. There are points where the depth is suspected to be less than 27½ feet at lowest water, and which need to be carefully examined, but in the mean time this depth is available by waiting for tides.

The breadth of the dredged channel is uniformly 300 feet, except between No. 1 Lightship and the White Buoy on Lake St. Peter, where it is 325 feet, at nearly all

bends where it is more or less enlarged up to a maximum width of 450 feet, and in Current St. Mary, where there remained some small points to be taken off to give the full breadth.

The chief details of the work done during the half year, and the cost of the same, are as follows :—

CAP CHARLES.

A dredge and stone-lifter were employed in parts of July and August, reducing a shoal and clearing away boulders from the upper end of the channel. Quantity dredged, 14,760 cubic yards, costing $41\frac{1}{2}$ cents per yard ; boulders lifted by stone-lifter, 485 cubic yards, costing 63 cents per yard.

POUILLIER RAYER.

A stone-lifter was employed for a short time in the fall, at clearing boulders off detached places. Quantity lifted, 452 cubic yards, costing \$2.55 per yard.

CAP À LA ROCHE.

Work was in progress at the opening of the fiscal year, and was continued with from one to three dredges and one to two stone-lifters till 15th November, during which time there were removed 4,650 cubic yards of hard-pan and stones in detached shoals, costing 86 cents per yard ; 77,520 cubic yards shale rock, costing 37 cents per yard ; and 810 cubic yards large boulders, costing \$1.36 per yard.

CAP LEVRAUT.

Work was being carried on with a stone-lifter at the beginning of the fiscal year, and was continued till the whole was completed and tested to $27\frac{1}{2}$ feet depth at low water. Boulders lifted, 1,430 cubic yards, costing \$1.14 per yard.

CHAMPLAIN.

Just above the bend and slightly to the north of the line of the Champlain Lights a small shoal of about 200 feet diameter, which greatly restricted the deep water space, was dredged off to $27\frac{1}{2}$ feet at low water.

Quantity dredged, consisting of sand, clay and stones, 1,005 cubic yards, costing $76\frac{3}{4}$ cents per yard.

BECANCOUR.

The dredging away of a small detached shoal on the lower traverse was in progress at the beginning of the fiscal year, and was continued to completion, giving $27\frac{1}{2}$ feet at low water throughout.

Quantity dredged, consisting of hard-pan and stones, 1,485 cubic yards, costing 78 cents per yard.

CAP MADELEINE.

Several small detached shoals and points of main shoals, at and just below the bend, were dredged off to $27\frac{1}{2}$ feet at low water.

Quantity, consisting of hard-pan, sand and stones, 1,335 cubic yards, costing 81 cents per yard.

NICOLET.

A small bar extending out from the main shoal on the south side was dredged through to $27\frac{1}{2}$ feet at low water.

Quantity, consisting of hard pan and stones, 6,825 cubic yards, costing 35 cents per yard.

LAKE ST. PETER.

The deepening of some detached pieces between the White Buoy and No. 3 Lightship was in progress at the beginning of the fiscal year, and was continued till

they were finished, which also finished the whole dredging of Lake St. Peter to $27\frac{1}{2}$ feet depth at low water

Quantity dredged during the fiscal year, 359,880 cubic yards, soft clay, costing $2\frac{1}{2}$ cents per yard, the lowest cost yet attained.

STONE ISLAND AND ILE DE GRACE.

Several portions of shoals were dredged off, so as to widen and straighten the natural channel and utilize it for the $27\frac{1}{2}$ feet depth.

Quantity dredged, 73,365 cubic yards, costing 13 cents per yard.

CONTRECŒUR CHANNEL.

One dredge was employed for a short time in midsummer, and another in the fall, in reducing some detached shoals and dredging through some unfinished places below Ile St. Ours. Two small spots, found in testing the former work in the upper part of the channel and between that and Verchères, were also cleaned off. This completed the channel to $27\frac{1}{2}$ feet depth at low water.

Quantity dredged, 15,065 cubic yards, costing 17 cents per yard.

VERCHÈRES TO POINT MARIE.

About a dozen small spots and points of shoals were dredged off, so as to widen and straighten the natural deep water and make it available for the $27\frac{1}{2}$ foot channel.

Quantity dredged, 11,865 cubic yards, costing 24 cents per yard.

CAP ST. MICHEL.

Work was in progress at the opening of the fiscal year, and was continued to completion. Nearly all the channel passing Cap St. Michel and Ile de Laurier is curved, and was made 450 feet wide.

Quantity dredged, 114,200 cubic yards, costing $5\frac{6}{10}$ cents per yard.

VARENNES.

This curve opposite Varennes has, as is well known, proved very difficult of navigation to deep draft steamers going downward. The radius of the curve was smaller than usual, and the current which sets to the north draws the steamers towards the bank of the channel and sometimes upon it. New lines, giving larger radius and greater breadth were laid out in 1887, and the dredging done both in that year and 1888 followed the new line for the north bank. This gives a maximum widening of 150 feet on that side, and at the worst place; and it has already afforded great relief to vessels navigating the curve.

A small piece of dredging was done last summer below the curve, a larger piece in the upper part of it and another in the Pouiller Varennes, after which the whole was tested to $27\frac{1}{2}$ feet at low water.

Quantity dredged last fiscal year, 144,720 cubic yards, consisting of clay, with some stones, costing $4\frac{2}{3}$ cents per yard.

ILE A L'AIGLE.

Opposite the lower end of the Island the point of a shoal was trimmed off to give more room in the natural channel.

Quantity dredged, consisting of clay and stones, 2,160 cubic yards, costing 18 cents per yard.

POINT AUX TREMBLES AND VICINITY.

On testing the channel at and below Point aux Trembles, a number of loose boulders and small spots were found in the work of former years at which there was slightly less than the standard depth. These were cleared off. A small piece of limestone rock at Point aux Trembles and nearly a mile of new work which remained at the upper end of the channel were also dredged through, after which the whole was tested.

Quantity dredged, 76,053 cubic yards, consisting of rock, stiff clay and stones, costing 24 cents per yard.

LONGUEUIL.

About half a mile in length of irregular cutting was done, chiefly between the bend and the head of the shoal, after which the work was tested to $27\frac{1}{2}$ feet at low water. The material consists of very stiff clay and hard-pan, packed full of boulders, of boulders imbedded in gravel and boulders alone, some of them of great size.

Quantity, 16,881 cubic yards, costing 76 cents per yard.

CURRENT ST. MARY.

The current is so swift that ordinary soundings are of little value in ascertaining the exact condition of the bottom, and it was, therefore, carefully tested with the testing scow. A small bar extending across the channel, and some isolated spots and points of shoals, were found in this way, on which there was less than $27\frac{1}{2}$ feet at low water. These consisted of clean boulders of all sizes, up to ten tons weight, and enough was done by a stone-lifter in removing them to afford a clear channel, but of rather less than full width. A few more yet require to be lifted to complete it.

Quantity lifted, 1,246 cubic yards, costing \$1.95 per yard.

The aggregate quantity of dredging done during the half year embraced in this report—that is, from 1st July to 31st December, 1888—was 926,292 cubic yards.

The floating plant employed consisted of six elevator dredges, three stone-lifters, nine screw-tugs, five barges, used as coal tenders and smiths' shops, eighteen hopper-bottomed scows and five flat deck scows.

Of the six elevator dredges, two are for working in earth, and have buckets of 16 and 28 cubic feet capacity; one is for rock or earth, and has buckets of 16 cubic feet capacity; another is for rock, and has buckets of 4 cubic feet capacity; and the remaining two are for rock, with buckets of $6\frac{1}{2}$ cubic feet capacity.

In accordance with an Act passed last Session of Parliament, 51 Victoria, chapter 5, the deepening of the Ship Channel became one of the public works of the Dominion, and was virtually so treated after 22nd May last. The immediate management of the work, however, remained in the hands of the Harbour Commissioners till 31st December last, when the staff, working plant, ship yard and shops were entirely handed over to Government.

The official connection of the Harbour Commissioners with the Ship Channel works then ceased, after having continued over thirty-eight years, during which time the Commissioners have carried out all the successive deepenings of the channel, from the effective commencement of the work till the end of 1888.

Yours respectfully,

JOHN KENNEDY,
Chief Engineer.

ALEXANDER ROBERTSON, Esq.,
Secretary Harbour Commissioners,
Montreal.

APPENDIX No. 7.

QUEBEC HARBOUR IMPROVEMENTS.

REPORTS ON THE PRINCESS LOUISE EMBANKMENT AND DOCK WORKS,
RIVER ST. CHARLES.

BY THE

QUEBEC HARBOUR COMMISSIONERS.

APPENDIX No. 7.

QUEBEC HARBOUR IMPROVEMENTS—RIVER ST. CHARLES.

HARBOUR COMMISSIONERS' OFFICE,
QUEBEC, 8th November, 1889.

SIR,—In compliance with request conveyed in your letter of the 25th June last, I have the honour to transmit you herewith the Chief Engineer's report on the harbour works for the last fiscal year.

I have the honour to be, Sir,
Your most obedient servant,
A. H. VERRET,
Secretary-Treasurer.

A. GOBEL, Esq.,
Secretary Public Works Department,
Ottawa.

OTTAWA, 4th November, 1889.

SIR,—I have the honour to submit the following with reference to the works of the Commission under my charge at Quebec during the fiscal year ended 30th June, 1889.

HARBOUR WORKS.

At the close of the year the whole of the foundations of the Cross Wall had been completed and the masonry superstructure brought to coping level, having only a portion of the earth filling, the erection of the gearing for operating the valves in the regulating culverts, and the mechanism for operating the drawbridge, to be completed.

During the year steady progress, in the face of many difficulties, was made on the South Wall, and at the close of the year there was every prospect that that important work would be completed before the setting in of winter, thus permitting a test being made of the Wet Basin in the spring of 1890.

Dredging over the area of the Wet Basin was prosecuted during the year, and a depth of 15 feet at low water, spring tides, has been attained, except at the head of the basin, which, it is expected, will be operated on before the close of navigation.

A change was made in the railway tracks on the Louise Embankment, a new track having been laid along the northern face, and alterations made at the eastern end for the purpose of facilitating the shunting of cars and preventing the dead lock which took place at times. The foundation and building for a scale for weighing railway cars were being proceeded with at the close of the year.

The works generally are in a good state and condition.

I am, Sir,
Your obedient servant,
HENRY F. PERLEY,
Chief Engineer.

A. H. VERRET, Esq.,
Secretary-Treasurer Harbour Commission,
Quebec.

APPENDIX No. 8.

REPORT

ON THE

SAGUENAY DISTRICT SLIDES AND BOOMS,

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889.

BY

HENRY F. PERLEY, Chief Engineer,

AND

JOSEPH ROSA, Superintendent.

APPENDIX No. 8.

SLIDE, BOOMS, &c.—SAGUENAY DISTRICT.

Ref. No. 103,721.

CHIEF ENGINEER'S OFFICE,
OTTAWA, 22nd November, 1889.

SIR,—I transmit herewith a report by Mr. Joseph Rosa, Assistant Engineer, on the Saguenay slide, for the fiscal year ended 30th June, 1889.

I have the honour to be, Sir,

Your obedient servant,

HENRY F. PERLEY,
Chief Engineer.

A. GOBEIL, Esq.,
Secretary Public Works Department,
Ottawa.

QUEBEC, 5th November, 1889.

SIR,—I have to report that the following works have been executed on the dams and slide on the little discharge of Lake St. John, generally known as the Saguenay slide.

These works, which were commenced in 1856, were completed in 1860, and consist of seven dams, a glance pier, anchor pier, booms and a slide.

Dam No. 3 was re-built, and a large anchor pier, built in 1887-88, at the head of the slide, was lengthened 91 feet.

Repairs were made to 103 feet of the main boom and slidemaster's house.

The number of logs which passed through the slide during the year amounted to 48,876.

I have the honour to be, Sir,

Your obedient servant,

JOSEPH ROSA,
Superintendent

HENRY F. PERLEY, Esq.,
Chief Engineer, Public Works Department,
Ottawa.

APPENDIX No. 9.

R E P O R T

ON THE

ST. MAURICE DISTRICT SLIDES AND BOOMS,

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889.

BY

HENRY F. PERLEY, Chief Engineer,

AND

CHARLES LAJOIE, Superintendent.

APPENDIX No. 9.

SLIDES AND BOOMS—ST. MAURICE DISTRICT.

(Ref. No. 102429.)

CHIEF ENGINEER'S OFFICE,
OTTAWA, 9th October, 1889.

SIR,—I transmit herewith a report by Mr. C. Lajoie, Superintendent of the St. Maurice District Slides and Booms, on the works under his charge, for the fiscal year ended 30th June, 1889.

I have the honour to be, Sir,
Your obedient servant,

HENRY F. PERLEY,
Chief Engineer.

A. GOBEIL, Esq.,
Secretary Public Works Department,
Ottawa.

ST. MAURICE RIVER WORKS OFFICE,
THREE RIVERS, 18th July, 1889.

SIR,—I have the honor to transmit you herewith my report on the St. Maurice River works under my superintendence, for the fiscal year ended 30th June last. Although the logs have not yet all arrived in the booms, the drive seems to be satisfactory.

The river having remained at a very high level, a large force of men had to be constantly employed, in order to prevent accidents, as much as possible.

The quantity of logs does not seem to exceed that of last year.

The amount voted for maintenance was	\$16,600 00
do do repairs was.....	5,000 00

The expenditure for maintenance was....	\$17,956 47
do do for repairs was	4,966 57

These repairs may be briefly described as follows, on the sheets hereto annexed.

I have the honour to be, Sir,
Your most humble servant,

CHARLES LAJOIE,
Superintendent.

H. F. PERLEY, Esq.,
Chief Engineer Department of Public Works,
Ottawa.

The following is a brief description of the above-mentioned repairs:—

ENTRANCE OF THE ST. MAURICE.

1. Construction of a pier built in 1858, from the low water level, 25 feet long, 25 feet wide by 15 feet high; sheathing same with 3-inch deals.
2. Twenty-two cross-heads of booms replaced by transverse cross-chains 20 feet long, of $\frac{7}{8}$ -in. iron, and other cross-heads added.
3. Two mooring posts planted on shore.
4. Sheathing with 3-inch deals one mooring pier on shore, of 20 by 12 by 15 feet.
5. Filling an undermined portion of a pier with 50 yards of stone and brush.

CAP CORNEILLE.

1. One thousand feet of booms, 6 feet wide, sheathed with 3-inch deals.
2. Demolition of a pier from low water level.

[1889]

3. Construction of an incline on trestles, 200 feet long and 2 feet wide.
4. Seventy-five yards of stone and brush filling for protection of Government property.
5. Blasting 15 large boulders of about 3 cubic yards each.

SHAWENEGAN.

1. Construction of mooring pier, 20 by 20 square feet, and 9 feet high, with a slope and two large pine posts.
2. Construction of a pier 42 feet long by 16 feet wide, and 26 feet high, to strengthen the damaged one on the north side of the slide.
3. Re-flooring the slide with 3-inch deals, on a length of 20 feet and a width of 13 feet.
4. Repairing the floor of slide-dam with 3-inch deals, for a length of 42 and a width of 10 feet.
5. Fixing 18 sheathing pieces on pier of Grand Remou at foot of falls.
6. Renewal of 1,170 feet of retaining boom, 5 feet wide, with 3-inch deals.
7. Replacing an old chock 10 feet long by 18 square inches, by a new one, on a retaining boom.
8. Extension of the pier for the station buildings for a length of 30 feet and a height of 8 feet; sheathing same with 2-inch deals.
9. Construction of a shed 45 feet long by 20 feet wide and 13 feet high.
10. Removal of the small shed nearer to the bank, in order to make room for the one above mentioned; covering same with shingles; clapboarding and flooring with 3-inch deals.
11. Repairs to house; doubling upper and lower floors; ceiling upper floor; making two bedrooms in upper story; fixing one dormer, two outside doors and 14 outside window sashes; papering the four rooms of the first story; painting and repairing all the openings; making a large cupboard in the kitchen; painting walls thereof, as well as those of upper story.
12. Whitewashing all the sheds and roofs of buildings at both stations.
13. Collecting 15 toise of stone, which can be used for ballasting pier at gate of retaining boom.

GRANDE MÈRE.

1. Construction of a scow 40 feet long by 10 feet wide.
2. Repairs to house; glazing and painting 8 double windows; making a floor of 30 by 24 feet; one stairs.
3. Flooring shed with deals, 30 by 24 feet.

GRANDES PILES.

1. Fixing 24 fenders, 12 feet long by 10 inches square, on piers; 3 face-timbers on piers, 25 feet long and 12 by 12 inches; 100 $\frac{3}{4}$ -inch iron bolts, 18 inches long; 20 1-inch iron bolts, 24 inches long.
2. Building a wooden stable, 12 by 12 feet.

Expenditure for maintenance and repairs during the fiscal year ended the 30th June, 1889 :—

Appropriation for maintenance	\$16,600 00	
Expenditure for do	17,956 47	
Over expenditure	\$1,356 47	\$1,356 47
Appropriation for repairs.....	\$5,000 00	
Expenditure for do	4,966 57	
	\$ 33 43	33 43
Over expenditure beyond appropriations.....		\$1,323 04

Dated at Three Rivers, this 18th July, 1889.

APPENDIX No. 10.

R E P O R T

ON THE

OTTAWA DISTRICT SLIDES AND BOOMS,

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889.

BY

HENRY F. PERLEY, Chief Engineer,

AND

GEO. P. BROPHY, Superintending Engineer.



APPENDIX No. 10.

SLIDES AND BOOMS—OTTAWA DISTRICT.

Ref. No. 102,431.

CHIEF ENGINEER'S OFFICE,

OTTAWA, 9th October, 1889.

SIR,—I transmit herewith the annual report by Mr. G. P. Brophy, Superintending Engineer, on the works under his charge on the Ottawa River and its tributaries for the fiscal year ended 30th June, 1889.

I have the honour to be, Sir,

Your obedient servant,

HENRY F. PERLEY,
Chief Engineer.

A. GOBEL, Esq.,
Secretary Public Works Department.
Ottawa

OTTAWA RIVER WORKS,

OTTAWA, 19th July, 1889.

SIR,—In accordance with instructions from your Department, I have the honour to submit the following report on the works under my charge on the Ottawa River and its tributaries for the fiscal year ended 30th June, 1889.

During the summer months of 1888 the waters of the main river and the streams falling into it were somewhat low, although at a fair pitch for driving, but later in the season portions of the timber and sawlogs were stuck or abandoned for the time being, on account of the low stage of the water. As formerly reported, the clearances effected by lumbermen on berths in the Ottawa valley, that have been worked on for a number of years and the opening up of large tracts of country for settlement, have tended to an earlier breaking up of the ice and a more rapid melting of the snow in spring, and, as a consequence, the freshets bring the streams to flood height about the time of the opening of navigation, to be soon followed by a low water pitch, modified only to a limited extent by the reserve waters held in check by the lumbermen through the erection of reservoir dams on the upper reaches of the tributaries. The general result of this is that the works are exposed to immense pressure in the spring and that full advantage cannot be taken of the great volume of water to pass the timber, while later the shallowness of the streams renders the driving operations tedious and expensive, if not impracticable.

After the close of the season of 1888 such of the foundations of the works as required strengthening were repaired and had defects made good. The work under the heads of repairs, reconstruction and construction was carried out during the time covered by this report, as follows:—

REPAIRS ON THE MAIN OTTAWA RIVER.

Ottawa or South Chaudière Station.

The slide here had its bottom timbers, planking and aprons repaired and the station house and store house improved. The bridges between the cities of

[1889]

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of Ottawa and Hull were repaired, oak planking having been substituted for worn-out sheeting; the wing bridge leading to Victoria Island was widened and had its support pier renewed. A solid filling in of stone having been placed under the approach, it will make this a permanent improvement and reduce to a minimum the cost of its future maintenance; the roadway causeway and approaches were cleaned, levelled up with gravel and macadamized. The planking of the Sappers and Maria Street bridges over the canal was patched and the masonry of the Dufferin Bridge repaired and pointed. As regards the maintenance of the roadway or causeway between the Hull slide crossing and the Union Suspension Bridge, I may here remark that on account of the enormous traffic, involving the passage of very heavy loads on this busy thoroughfare, ordinary materials, such as macadamizing stone and gravel, laid here are soon pulverized, and tend to the formation of a coating of dust and mud. These constant renewals and cleanings have become very expensive, so much so that when the new bridge to replace the Suspension Bridge shall have been erected I would strongly recommend the laying of a more durable and serviceable pavement on the approaches, such as the roadway of granite blocks laid between the Suspension Bridge, at its southerly end, and the iron bridge across the Chaudière slide channel, which, after a severe test of two or three years' duration, seems to have given every satisfaction.

North Chaudière or Hull Station.

The slide at this place was repaired in its planking, bulkhead and guide booms, and casual defects remedied during the running season.

Britannia.

At Britannia, near the head of the Deschênes Rapids, the snubbing appliances for rafts and bands of timber, preparatory to running the rapids, having been damaged by ice shoves, a sunken or anchor pier, with float and buoy, was placed there to meet the requirements of the raftsmen, and has served a very good purpose.

Chats Station.

The curved pier near the head of the slide, where its timbers had become decayed, was thoroughly overhauled; a support pier in the basin, which had been displaced by moving ice was rebuilt; the guard pier in the basin had to be renewed and the main bulkhead reconstructed; the stiff guide boom near the slide entrance, where broken, had new timbers and plank covering inserted, and the bottom planking of the slide below the entrance, where it had been damaged or partially carried away, was replaced by elm sheeting.

Chenaux Station.

The extensive booms at this place were repaired and strengthened, and provision made for their greater security and more efficient working, by the placing of additional mooring piers, platforms and attachments.

Portage du Fort Station.

The work necessary to be done here embraced the repairing of the timbers and planking of two flat dams; the renewal of guide boom sections where dilapidated; the repairs of bulkhead; the re-topping of the side piers of slide, where the guard timbers had been carried off and the caulking and stanching of the slide bottom by planting narrow strips in the openings of the floor.

Mountain Station.

The bottom of the slide was repaired by placing tamarac planking in lieu of that worn out; the side piers were strengthened by laying new timbers, and new stop-logs provided, and the booms in their coverings and fastenings repaired.

Calumet Station.

The repair work at this place consisted of the making good of defects in the side piers and bulkheads; replacing stop-logs; patching the long and short slides; strengthening booms and facing by cribwork and stone; filling a portion of the river bank, as a safeguard against a washout by the action of high water. The works here require a general overhaul, and with this object in view a quantity of timber has been procured, which will be worked in after the present running season, as far as the means at my disposal will allow.

Joachim Station.

Repair works were executed here at the bulkhead, bridge and waste weir on south side of upper slide, guide pier near waste gate, old by-wash on north side of upper slide, what is known as the "O'Connor" dam and the boom at the lower slide. At the main slide the side piers were strengthened and the bottom planking renewed and the sills levelled up.

Rocher Capitaine Station

At the slide the timbers and sheeting were repaired and the stone filling of the piers made up where it had sagged. The dams in their timbers were strengthened, the sheeting repaired and stanchied, and snubbing piers provided above the upper slide entrance.

REPAIRS OF WORKS ON TRIBUTARIES.

Gatineau River.

The main boom near the mouth of this stream had its piers and fastenings strengthened; the sorting gaps and division booms enlarged and improved; the guard piers at the canal faced and repaired in their stone filling; the creek and channels leading to the lower sorting gaps in the Ottawa river, where blocked with debris and mill rubbish, were cleaned and made passable. The timbers and sheeting of the bridge across the canal leading to the reserve pond were also repaired.

Madawaska River.

The dams, slides, piers and booms at Chain Rapids, Ragged Chute, High Falls, Bailey's Chute, Flat Rapids, Arnprior, and mouth of the stream and the side and wing dams between these stations, where the foundations and planking had been damaged by the action of high water, ice shoves or timber jams, were repaired and the boom mooring facilities in the Chats Lake increased. On this tributary large quantities of logs pass the works, in addition to square and sided timber, dimension stuff and ties, and as the drive from the upper reaches to the head of Calabogie Lake, about 30 miles from the mouth, is a mixed one, delays take place there to admit of sorting out the supplies for the local mills and for transportation by rail, and at the low water season logs may be found jammed and stranded for miles of the course of the river. On a sudden rising of the water these logs are again afloat, and in a swift current subject the river works to very great pressure, with corresponding tear and wear.

Coulange River.

The dams and booms above the principal chute on this stream were repaired. These works had been considerably damaged by the passing out of large fields of solid

ice in the spring of 1888. The planking of the long slide, where worn in places, was made good, and certain small repairs done to the booms and piers below High Falls and near the mouth of the river.

Black River.

At High Falls station, in the spring of 1888, the slide side piers and the main dam were strained and damaged by high water, and it was possible to carry out temporary repairs only to admit of the passage of the timber, &c., of that year. During the winter months much has been done to strengthen the slide in its superstructure and foundations, and to put the dam at the head of the chute, which supplies water to the slide, in a state of efficiency. The retaining and guide booms above the slide, with their piers and attachments, were also repaired.

Petewawa River.

On this tributary there is an extensive series of improvements, extending from the outlet of Cedar Lake to the mouth, and consisting of retaining and side dams, piers, booms and single-stick slides. Many of these works have been in use for a period of from twenty to thirty years, and although they have from time to time been repaired, the necessity for the reconstruction of a large portion of them has become urgent. During the winter and spring months the foundations of the dams and slides were blocked up, the slide planking partially renewed, the dams stanchied, and the waste gate at the second chute dam repaired, while at the mouth of the river the retaining booms and support piers were strengthened.

Dumoine River.

The foundations of the long slide having partially given away, it became necessary to insert crib-work, filled with stone, to support the slide proper, as also to block and level up the superstructure. The dam at Ryan's chute and some of the wing dams which had sustained damage at the time of high water and from the passing of logs had their timbers and sheeting repaired.

The work done under the head of reconstruction consisted of the rebuilding of portions of the Calumet slide piers and the restoration of the dam at Ragged Chute, on the Coulonge River, while the construction work covered the building of the new wharf at the foot of the Long Sault, on the line of traffic to the Lake Temiscamingue lumbering and colonization district, and also the booms and support piers placed near the head of the Calabogie Lake, an expansion of the Madawaska River. These last improvements were designed to facilitate the sorting of logs and other descriptions of timber that the owner might desire to separate from the general drive on the stream, and thus enable them to manufacture or otherwise dispose of the raw material on the lake shore or at the outlet near the railway crossing.

The spring of 1889, on the southern tributaries in the Ottawa valley, was what may be considered an early one, and snow rapidly disappeared before the lumbermen had fairly completed the drawing of their timber, &c., to the banks of the streams.

The creeks attained no great height, when they should have been in full flood, and it was at one time thought that the bulk of the drives would be stuck, but continuous rainfalls later on, together with an ample flow of the north waters, had the effect of swelling the Ottawa and its tributary rivers to such a favorable pitch for driving during the months of May and June that timber of every description moved freely, and there is every prospect of a comparatively clean sweep this season.

The following statement, compiled from the records in possession of the collector of slide dues in this city, shows the volume of business done at the works in passing the various descriptions of timber, together with the amount of revenue accrued as tolls for the fiscal year covered by this report:—

	Pieces.
White pine.....	42,420
Red ".....	14,809
Boom and dimension	26,199
Cedars.....	32,898
Tamarac.....	2,932
Elm.....	2
Ash.....	140
Spruce.....	226
Telegraph poles.....	1,468
Birch.....	41
Basswood.....	8
Oak.....	1
54,232 railway ties, equal to 6,779 pieces flat timber.....	6,779

Total pieces of timber.....	127,923
And pieces of sawlogs	3,725,386

The revenue accrued on the above was \$84,709.39.

In respectfully submitting the above,

I have the honour to be, Sir,
Your obedient servant,
GEO. P. BROPHY,
*Superintending Engineer,
Ottawa River Works.*

HENRY F. PERLEY, Esq.,
Chief Engineer Public Works Department,
Ottawa.

APPENDIX No. 11.

REPORT

ON THE

NEWCASTLE DISTRICT SLIDES AND BOOMS,

BY

HENRY F. PERLEY, Chief Engineer,

AND

R. B. ROGERS, Superintending Engineer

APPENDIX No. 11.

SLIDES AND BOOMS—NEWCASTLE DISTRICT.

Ref. No. 102,430.

DEPARTMENT PUBLIC WORKS,
CHIEF ENGINEER'S OFFICE,
OTTAWA, 9th October, 1889.

SIR,—I transmit herewith a report by Mr. R. B. Rogers, Superintending Engineer River Trent and Newcastle District Works, on the works under his charge for the fiscal year ended 30th June, 1889.

I have the honour to be, Sir,
Your obedient servant,
HENRY F. PERLEY,
Chief Engineer.

A. GOBEIL, Esq.,
Secretary Public Works Department.

ENGINEER'S OFFICE,
PETERBOROUGH, 29th July, 1889.

SIR,—I have the honour to submit the following report on the works under my charge in connection with the Department of Public Works for the fiscal year ending 30th June, 1889.

The works on the River Trent, and the waters of what was formerly known as the "Newcastle District," are divided into two classes, those erected exclusively for the improvement of navigation and those erected to facilitate the descent of timber. The former are under the control of the Department of Railways and Canals; the latter are under the control of the Department of Public Works. Those under the Department of Public Works consist of dams, slides, booms and all such works as are necessary to facilitate the descent of timber.

The water last season stood at the average height. This spring the water was very low, and fears were entertained that there would be a great scarcity before the season was over. Care was therefore taken during the month of May to save as much water as possible in the reservoirs, but during the latter part of May and the early part of June heavy falls of rain filled the reservoirs up to high spring water mark. This was a great boon to many lumbermen, who had concluded to "lay up" their drives for want of water to drive.

The works of repair executed at the different stations are as follows:—

Scugog River.

The river was cleared of snags. Lights were kept on the two beacons at the mouth of the river, which have been a great benefit to navigation.

Bobcaygeon.

A pier and boom were constructed at the entrance of "Big Bob" channel to prevent "bags" of logs from drifting into the navigation channel.

Fenelon Falls.

On account of the swing not being placed in the railroad bridge above the lock, navigation could not be opened at this station. There was, therefore, no immediate necessity for the piers and booms that were to be constructed to protect navigation in the river. Part of this appropriation was therefore used for the construction of piers and booms at Buckhorn, where they were urgently needed.

Buckhorn.

Four piers were constructed here, to prevent the logs on approaching the slide from stopping navigation to the canal.

Young's Point.

A glance pier below the slide was built to prevent the logs from passing into the navigation channel on the west side.

Otonabee River.

Some work was done in removing boulders from the shoal known as "Yankee Bonnet."

Trent River.

The work of removing boulders from the navigation channel at "Hincks' Bar" was proceeded with.

I have the honour to be, Sir,

Your obedient servant,

RICHARD B. ROGERS,

Superintending Engineer.

H. F. PERLEY, Esq.,
Chief Engineer, Public Works Department,
Ottawa.

STATEMENT showing the total quantity of Sawlogs, Boom Timber, Cedar &c., which passed through the different slides on the Trent and "Newcastle District" waters, for the fiscal year ended 30th June, 1889.

Station.	Saw Logs.	Boom Timber.	Cedar 16 ft.	Square Timber.	Railway Ties.	Telegraph Poles.
Fenelon Falls.....	250,700	3,975				
Bobcaygeon.....	137,200	3,170				
Buckhorn.....	137,200	3,170				
Burleigh.....	177,200	3,970				
Young's Point.....	275,945	4,721	53,223		20,091	
Lakefield.....	157,218	2,813	53,223		20,091	
Whitlaw's Rapids.....	121,006	1,933	53,223		20,091	
Hastings.....	121,006	1,933	53,223		20,091	
Heely's Falls.....	168,449	2,808	53,223		20,091	
Middle Falls.....	400,377	11,159	103,223	336	70,091	5,000
Chisholm's Rapids.....	400,377	11,159	103,223	336	70,091	5,000

RICHARD B. ROGERS,
Superintending Engineer.

APPENDIX No. 12.

STATEMENT OF STAFF EMPLOYED

ON THE

SLIDES AND BOOMS

THROUGHOUT THE DOMINION.

APPENDIX No. 12.

Ref. No. 103,120.

STATEMENT showing Names, Dates of Appointment, Salaries, &c., of persons employed on the different Slides and Booms, &c., on 30th June, 1889.

Name.	Date of Birth.	Position.	Where Employed.	Date of Appointment.	Salary.	Remarks.
<i>Saguenay District.</i>						
Arthur Boulanger...	Sep. 11, 1854	Superintendent...	Saguenay	May 19, 1881	475 00 p. ann.	<i>Saguenay Works.</i> In addition to the Superintendent, there are employed on the Saguenay works 4 flagmen, at 70c. per day each during the passing of the logs through the slides, which lasts one or two months.
Calixte Fortin		Asst. Superintendent	do	do 13, 1881	30 00 p. m.th.	
<i>St. Maurice District.</i>						
Charles Lajoie...	Dec. 28, 1824	Superintendent.	Three Rivers.	Oct. 7, 1878	1,200 00 p. ann.	<i>St. Maurice Works.</i> Every year during the timber running season, the officers in charge of the various stations employ 25 to 30 men during 3 or 4 months at the rate of 80c. to \$1.10 per working day, inclusive of 40 or 50 cents. per day per man, paid for board to the Deputy Slide Masters and Boom Keepers; also one clerk and foreman, at \$1 per day, two watchmen and one gate-keeper.
J. B. Normand...	1837	Asst. Superintendent	Mouth of St. Maurice	April 12, 1858	3 00 per day.	
N. Dagneau		Paymaster	Three Rivers	Aug. 1, 1886	50 00 p. m.th.	
Cyrilac Lymburner	1833	Foreman	Cap aux Cornelles.	April 25, 1881	565 00 p. ann.	
Jos. Page	July 7, 1845	Boom Keeper.	do	Dec. 10, 1879	469 50 do	
Arthur Rousseau	do 30, 1831	Slide Master.	Shawenegan.	April 12, 1858	3 00 per day.	
Louis St-Onge		Asst. Slide Master.	do	July 24, 1885	365 00 p. ann.	
Charles Langlois	1840	Foreman	do	Jan. 13, 1880	535 00 do	
Théophile Larue	Sept. 3, 1827	Boom Keeper	Grand Mère.	Mar. 15, 1872	2 00 per day.	
Frs. Lacroix	1833	Asst. Boom Keeper.	do	April 1, 1866	469 50 p. ann.	
Arthur Pellerin		Boom Keeper.	Les Grés.	Aug. 5, 1885	365 00 do	
<i>Richelieu District.</i>						
Azarie Bienvenue,		Boom Master	Belœil Station	June 1, 1882	100 00 do	
<i>Ottawa District.</i>						
G. P. Brophy	Feb. 24, 1846	Superintendent.	Ottawa.	July 6, 1873	2,500 00 do	<i>Ottawa River Works.</i> In addition to the above officers, &c., there are employed during the running season, one foreman on slide at \$1.50 and one assistant foreman at \$1.25 per day.
D. Scott.	do 15, 1830	Accountant.	do	Oct. 1, 1854	1,500 00 do	
J. C. Scott.	June, 1865	Measure & Time Kpr.	do	April 1, 1889	2 00 per day.	
Wm. Kane.	Dec. 24, 1820	Messenger.	do	Aug. 1, 1867	1 25 do	

Moses Aubry	July	15, 1825	Foreman Carpenter.	do	.....	April 21, 1885	800 00 p. ann.	also 25 to 30 laborers, at from \$1 to \$1.40 per working day.
Pierre St-Pierre	Mar.	13, 1833	Deputy Slide Master.	Carillon	.....	May 21, 1878	1 25 per day.	Employed about 7 months during season of navigation.
D. Noonan	June	17, 1840	Boom Master.	Gatineau	.....	April 25, 1876	500 00 p. ann.	Employed about 7 months during season of navigation, oversees repairs in winter.
W. J. Macdonald.	Feb.	17, 1835	Deputy Slide Master.	Chaudière	.....	Mar. 1, 1877	635 00 do	Employed about 7 months during season of navigation, oversees repairs in winter.
J. Soulière	Nov.	8, 1829	do	do	.....	do	2 00 per day.	Employed about 6 months during season of navigation.
J. McDonall.	do	1, 1818	do	Hull	.....	do	1 25 do	Employed about 6 months during season of navigation, oversees repairs in winter.
D. McFarlane.	Feb.	25, 1836	do	Chats	.....	do	480 00 p. ann.	Employed about 3 months during season of navigation.
John Harvey	May	22, 1831	Slide Master.	Amprior	.....	July 12, 1882	2 50 per day.	Employed about 5 months during season of navigation, oversees repairs in winter.
Jas. McCrear.	Mar.	26, 1839	Boom do	Springtown	.....	May 15, 1880	300 00 p. ann.	Employed about 5 months during season of navigation.
Patrick Barry	do	27, 1838	Slide do	High Falls	.....	Mar. 10, 1888	300 00 do	Employed about 5 months during season of navigation, oversees repairs in winter.
Duncan McLaren	Jan.	7, 1860	Deputy Slide Master.	Portage du Fort	.....	Sept. 7, 1881	456 25 do	Employed about 5 months during season of navigation.
J. G. Poupore.	Feb.	27, 1837	do	Black River	.....	Oct. 15, 1880	480 00 do	Employed about 5 months during season of navigation.
Jas. Steen Rowan.	Aug.	27, 1836	do	Lower Petewawa	.....	Mar. 18, 1887	300 00 do	Employed about 5 months during season of navigation.
Wm. Thompson	May	3, 1843	do	Mountain	.....	Oct. 10, 1879	1 25 per day.	Employed about 6 months during season of navigation, oversees repairs in winter.
D. Carmichael.	Sept.	26, 1813	do	Calmet	.....	August, 1848	40 00 p. m.th.	Employed about 7 months during season of navigation, oversees repairs in winter.
A. Proudfoot	July	17, 1822	do	Coulange	.....	April 1, 1865	1 00 per day.	Employed about 4 months during season of navigation, oversees repairs in winter.
H. Corley	Mar.	20, 1820	do	Upper Petewawa	.....	April 15, 1886	1 75 do	Employed about 4 months during season of navigation, oversees repairs in winter.
J. Lafrance.	do	do	do	do	.....	do	2 00 do	Employed about 4 months during season of navigation.
A. McDougall	July	20, 1814	do	Jochims	.....	Nov. 6, 1871	300 00 p. ann.	Employed about 4 months during season of navigation.
Jos. Dufault	Jan.	15, 1840	Boom Master.	Dumoine	.....	April 24, 1882	1 50 per day.	Employed about 4 months during season of navigation, oversees repairs in winter.
Hugh Grant	Mar.	25, 1829	Deputy Slide Master.	do	.....	do	300 00 p. ann.	Employed during season of navigation, 3 m'ths. Will inspect works if required.
A. McEwen	Aug.	20, 1829	do	Rocher Capitaine	.....	May 1, 1874	480 00 do	Employed during season of navigation, 3 m'ths. Will inspect works if required.
A. H. Johnson	Nov.	28, 1839	do	Cheneaux	.....	1865	2 50 per day.	Paid during season of navigation about 7 m'ths. Attends to repairs in winter.
G. T. Johnson	Sept.	10, 1841	do	do	.....	1872	1 75 do	Paid during season of navigation, about 7 m'ths. Attends to repairs in winter.
<i>Newcastle District.</i>								
R. B. Rogers	Jan.	17, 1837	Superintendent.	Peterboro'	.....	July 1, 1884	600 00 p. ann.	Receives also \$600 per annum from Department of Railways and Canals.

APPENDIX 12.—STATEMENT showing the Names, &c., of persons employed on the different Slides and Booms—*Concluded.*

Name.	Date of Birth.	Position.	Where Employed.	Date of Appointment.	Salary.	Remarks.
<i>Newcastle District—Con.</i>						
G. H. Giroux	Clerk Supt's. Office	Peterboro'	July 1, 1882	\$ 300 00 p. ann.	Receives also \$300 per annum from Department of Railways and Canals.
Robert Armstrong	Slide Master	Chisholm Rapids	April 1, 1883	200 00 do	
John Ingram	do	Fenelon Falls	do 1, 1883	200 00 do	
W. H. Hall	do	Buckhorn	May 1, 1879	100 00 do	Receives also \$150 per annum from Department of Railways and Canals.
H. Deacon	1825	do	Heeley's Falls	July 1, 1878	200 00 do	
<i>Burlington Channel.</i>						
Thos. Campbell	April 1, 1832	Ferryman	Burlington	April 12, 1887	400 00 do	
H. Cotter	Asst. Ferryman	do	do 12, 1887	30 00 p. m'th.	
<i>Yamaska Lock.</i>						
A. Labbé	Lock Keeper	Yamaska	Sept. 1, 1885	1 25 per day.	
O. Mineau	do	do	do 1, 1885	1 25 do	
<i>Esquimalt Graving Dock, B.C.</i>						
John Devereux	Dock Master	Esquimalt	do 17, 1887	166 66 p. m'th.	
C. Muir	Engineer	do	April 1, 1887	100 00 do	
A. D. Greeves	Carpenter	do	Dec. 1, 1887	80 00 do	

APPENDIX No. 13.

R E P O R T

ON

GOVERNMENT TELEGRAPH LINES,

FOR THE FISCAL YEAR ENDED 30TH JUNE, 1889,

BY

F. N. GISBORNE, SUPERINTENDENT.

APPENDIX No. 13.

REPORT ON GOVERNMENT TELEGRAPH LINES.

Ref. No. 102,968.

OTTAWA, 1st September, 1889.

SIR,—I have the honour to submit the following report upon the telegraph service for the twelve months ended 30th June, 1889, with the usual tabular statements of lines, operating staff, &c., established in the several districts.

In order to obviate the lack of correspondence that has heretofore existed between the revenue figures set down in my annual reports and those appearing in the departmental and other statements, in consequence of my reports embracing the entire traffic for the period July to June, inclusive, whereas the others only comprised such amounts as had come to hand during the fiscal year, as explained in the note appended to my last annual report, I have, in the within statement, departed from the usual course, and set down the amount of revenue actually brought to account up to the close of the fiscal year. This course will be observed hereafter, so that the figures appearing in the several printed reports will exactly agree.

I have the honour to be, Sir,

Your obedient servant,

F. N. GISBORNE,

Superintendent Government Telegraph Service.

A. GOBEL, Esq.,

Secretary Public Works Department,
Ottawa.

TELEGRAPH SERVICE—1888-89.

NEWFOUNDLAND.

The line between Cape Ray and Port au Basque was maintained and operated as in previous years, under an agreement made with the Anglo-American Telegraph Company, at the usual cost of \$250.

MARITIME PROVINCES.

The usual systems in the Maritime Provinces were operated satisfactorily under the same arrangements as in previous years.

The Meat Cove line, which was partly re-poled in the autumn of 1887, was further renewed last fall, and has since been in good condition; the unrenewed portions being sufficiently reliable for another two years service.

The cable between Grand Manan and Campobello became interrupted on the 2nd May of this year, 1889, and has not yet been repaired, in consequence of the S.S. "Newfield," the only properly equipped vessel we have for such work, being otherwise engaged.

In October last a loop was constructed by a local contractor, from the Mabou Cheticamp telegraph line to North-East Margaree, a distance of 5 miles. An office was opened at that place in the following month.

[1889]

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The revenue and expenditure in connection with the several lines in the Maritime Provinces was as follows:—

	Period inclusive.	Revenue.	Expenditure.
Eseumiaue Line.....	April 88 to April 89.....	\$ 132 31	\$ 242 59
Meat Cove “	March 88 to May 89.....	1,049 57	1,951 98
Cape Sable “	March 88 to May 89.....	63 63	368 16
Bay of Fundy “	June 88 to June 89.....	725 57	1,073 47
Cheticamp “	March 88 to May 89.....	275 46	778 22

RIVER AND GULF ST. LAWRENCE.

The Bird Rock cable was again interrupted on the 26th April. It was soon afterwards discovered to have been caused by a mass of rock and ice crushing it at the base of Bird Rock. The operator in charge made a temporary repair, and later on the S.S. “Newfield” visited the spot, 21st June, and Capt. Guildford put in a short piece of new cable.

The shore end of the Anticosti cable was damaged by ice on the rocks near South West Point early in the spring; it was not telegraphically interrupted, however. The S.S. “Newfield” repaired the damage on the 15th June.

With these exceptions, the cables in the Gulf have been free of trouble during the year, and are at present in good order.

On the north shore St. Lawrence the telegraph line that had in the autumn of 1886 been constructed to Birch River was further extended to Sheldrake. The work of cutting poles and clearing roadway was begun in April, and conducted by days labor under the local inspector. In August the work of construction was proceeded with, and the line was completed to Sheldrake on the 15th September, when work was stopped for the season. During the present year this line will be further extended to Point aux Esquimaux.

The cables laid down last year in connection with the Grosse Isle quarantine station, failed to remain long in operation, and it was decided to replace them by cables of a much heavier type. Accordingly, in January last, four knots of heavy shore end cable was ordered from England, and this was laid in two sections by the S.S. “Newfield,” under my personal supervision, in June, and communication was re-established on the 9th of that month, since when the line has been free of interruption.

The others of the Gulf land lines and cables have been maintained in working order during the year.

The revenue and expenditure figures are as follows:—

	Period inclusive.	Revenue.	Expenditure.
Anticosti line.....	January, 1888 to June, 1889....	\$ 432 12	\$1,766 86
Magdalen Islands.	October, 1887 to February, 1889	642 48	2,812 81
North Shore, St. Lawrence, (W.B.)—	June 1888 to May, 1889	1,827 45	3,727 35
North Shore, St. Lawrence (E. B.) —	Offices collectively	843 25	4,213 18
Quarantine—	March, 1888 to April, 1889.....	295 20	633 57

ONTARIO.

The Bath Amherst Island line was, under an agreement entered into 8th February, 1889, leased to the North American Telegraph Company, for a period of twenty-one years, dating from 1st January, 1889. The company to pay an annual rental of \$1. The agreement is terminable at any time after three months notice.

The revenue and expenditure, up to date of transfer was as follows:—

	Revenue.	Expenditure
July, 1888, to December, 1889, inclusive	\$ 46 23	\$44 69
[1889]		

On the 30th August, 1888, a cable $8\frac{3}{4}$ miles in length was laid under my personal supervision from Point Pelee to Pelee Island, in Lake Erie, for a connection between the latter place and Leamington, Ont. The land line sections, 11 miles on the Island and 12 miles on the main land, were constructed by day's labor. Work was begun on the 21st August, and completed on the 13th October. The line was equipped with telephones, three offices were opened on the Island and one at Point Pelee; connection was made with the Bell Telephone Exchange at Leamington, and a working arrangement was made with the company for the operation of the line in connection with their system. The line was opened for business on the 16th November.

The revenue and expenditure since the opening of the line was as follows:—

	Revenue.	Expenditure.
November, 1888 to May, 1889, inclusive.....	\$70 55	\$70 23

In September I also personally superintended the laying of two short sections of cable for the connection of Wolfe and Howe Islands by telephone with Kingston, Ont. The length from Wolfe Island to Howe Island was 1 mile, and that from Howe Island to the mainland $\frac{1}{6}$ of a mile. The land line sections were constructed by the North American Telegraph Company in connection with whose system the line is being operated, under an agreement dated 21st January, 1889, whereby the company, for the sum of \$1,000, and sufficient material, excepting the poles, for 23 miles of line, together with the cables laid, undertook to operate the line in perpetuity without further expense to the Government. The revenue of this line accrues to the company.

NORTH-WEST TERRITORY.

The work of re-poling the Qu'Appelle-Humboldt section, which was under way when my last annual report was submitted, was duly completed in November.

A small building was erected at Saddle Lake, on the Battleford, Edmonton section, and an office and repairing station was established there in August, 1888.

The work of re-poling the Prince Albert line was also completed in the Autumn, and in April following a loop line was erected to Batoche, and an office established at that place. The lines throughout are now in first-class order.

In November last the inhabitants of Saskatoon offered to transfer to the Government the line built by them, assisted by a grant of the requisite material, excepting the poles, between Clark's Crossing and Saskatoon, 14 miles, to be operated in conjunction with the rest of the system. The line was subsequently taken over, and during the past season has been re-poled throughout and the route somewhat altered to secure greater facility of maintenance. The line is now in good working order.

In July a telephone system, embracing five offices, was established at Banff, N. W. T. The total length of line is $4\frac{1}{2}$ miles, and connects the Mounted Police barracks with the Government offices and the hotels.

The revenue of the North-West Lines, June, 1888, to May, 1889, inclusive, was \$6,413.56; and the expenditure during the year was \$25,137.41.

BRITISH COLUMBIA.

The line north of Ashcroft is being operated, as arranged for, in connection with the Canadian Pacific Railway Telegraph system, at the expense of the Government. The present average expenditure for maintenance exceeds the revenue by about \$350.00 per month. The total excess of expenditure over revenue from the date of operation, under agreement, 1st October, 1886, to 31st December, 1888, was \$7,609.31 and from 1st January to 30th June, 1889, was \$2,137.55.

A line from Victoria to Cape Beale, a distance of about 115 miles, is now in course of construction along the south shore of Vancouver Island.

RECAPITULATION.

	Revenue.	Expenditure.	Remarks.
Gulf of St. Lawrence and Maritime Provinces:—	\$ cts.	\$ cts.	
Anticosti Island lines	432 12	4,166 86	Signal Service and Meteorological Service messages transmitted free of charge.
Magdalen Islands lines	642 48	4,912 81	
Meat Cove line	1,049 57	1,951 98	
Cape Sable “	63 63	368 16	
Escuminac “	132 31	242 59	
Cheticamp “	275 46	778 22	
Bay of Fundy line	725 57	1,073 47	
Quarantine “	295 20	7,178 33	
North Shore St. Lawrence (W. B.)	1,827 45	3,727 35	
“ “ (E. B.)	843 25	4,213 18	
Cape Ray, Newfoundland	nil	250 00	
Subsidies, stationary line and office material, cable repairs and contingencies chargeable to the appropriation for Gulf lines		9,686 77	
	\$ 6,287 04	38,549 72	
Ontario-Bath-Amherst Island line	46 23	44 69	
Pelee Island line	70 55	70 23	
	\$ 6,403 82	\$38,664 64	
North-West Telegraph Lines	6,413 56	25,137 41	
Total	\$12,817 38	\$63,802 05	

NOTE.—The amount of expenditure on Anticosti Lines includes \$2,000 indemnity to the Anticosti Company for wood cut, etc., and \$400 for the s.s. Newfield in making cable repairs. The ordinary maintenance took up the balance \$1,766.76.

The expenditure on Magdalen Island Lines includes \$2,100 for the s. s. Newfield in making cable repairs. The balance, \$2,812.81 was expended on ordinary maintenance.

The expenditure on Quarantine Line includes cost of cable repairs and 4 knots new cable purchased in the spring; the outlay for ordinary maintenance was \$633.57.

F. N. GISBORNE,

Superintendent Government Telegraph Service.

OTTAWA, 1st September, 1889

GOVERNMENT TELEGRAPH SERVICE.

NEWFOUNDLAND TELEGRAPH SYSTEM.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Port au Basque.....	0	.....	50 00 or com'n.....	.....	N.B.—The commission is 25 per cent. upon all business to and from the office ; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Cape Ray Lighthouse.....	14	.....	50 00 do .....	.....
	Totals... ..	14		100 00		

Cost of land line, \$1,763.36 ; interest thereon at 5 per cent., say..... \$ 90 00
Estimated annual maintenance and repairs..... 160 00

Total..... \$250 00 Required in Estimates, 1889-90.

N.B.—The above short line is constructed in connection with the Signal Service, and connects at Port au Basque with the land line system of the Anglo-American Telegraph Company.

ANTICOSTI TELEGRAPH SYSTEM.
ANTICOSTI ISLAND SERVICE.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per annum.	Date of Appointment.	MEMO.
1	*Fox Bay	Miles. 0	J. Stubbart	\$ cts. 50 00 or com'n.	Nov. 1, 1888	N.B.—The commission is 25 per cent. upon all business to and from the office; and commission guaranteed not to be less than at the rate of \$50 per annum.
2	Heath Point Lighthouse.	23	T. Gagné	50 00 do	July 20, 1881	
3	South Point Lighthouse.	32½	A. Nadeau	50 00 do	Oct. 1, 1888	
4	*Shallop Creek	17½	B. Bradley	50 00 do	July 7, 1881	
5	Salt Lake	52½	F. Denault	360 00 do	Oct. 19, 1881	General Repairer. Plus \$1 per day when absent on duty.
6	South-West Point Lighthouse.	15	Miss G. Pope	200 00 do	Oct. 18, 1880	Chief Operator since 1st August, 1882.
			E. Pope	100 00 do	Aug. 1, 1882	District Superintendent. Plus \$1 per day when absent on duty.
7	Jupiter River	7	.....	50 00 do	.....
8	Offet River	17½	.....	50 00 do	.....
9	*Beesie River	22	M. Duguay	50 00 do	Oct. 1, 1886	
10	Cape Eagle (Ellis Bay)	10	.....	50 00 do	.....
11	West Point Lighthouse.	14	A. Malouin	50 00 do	Aug. 1, 1881	NOTE—A special allowance for maintenance of office, \$50 per annum, has been added to the commission for offices marked*, since September, 1887.
12	*English Bay	3	F. Cabot	50 00 do	July, 1, 1882	
	Total	214		1160 00		

ANTICOSTI TELEGRAPH SYSTEM.

GASPÉ.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per annum.	Date of Appointment.	MEMO
1	L'Anse à Fougère.....	Miles.		\$ cts. 50 00 or com'n.		N.B.—The commission is 25 per cent. on all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Gaspé Basin.....	28	J. J. Annett.....	150 00	Oct. 16, 1881..	
		28		200 00		

ESTIMATED COST OF ANNUAL MAINTENANCE OF ANTICOSTI SYSTEM

Land lines	Salaries and repairs.....	\$3,000 00
Cables—Repairs, say.....		1,000 00
Total.....		\$4,000 00
Less—Revenue, probably.....		500 00
Balance deficit.....		\$3,500 00
		Required in Estimates, 1889-90.

GOVERNMENT TELEGRAPH SERVICE—Continued.

MAGDALEN ISLANDS TELEGRAPH SYSTEM.

MAGDALEN ISLANDS SECTION.

No.	STATIONS.	Inter- mediate Distances.	Operators.	Salaries per annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Amherst	0	Miss J. Shea	50 00 or com'n.	Oct. 1, 1882.	N.B.—The commission is 25 per cent. on all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Amherst Lighthouse	9	Wm. Cormier	50 00 do	June 11, 1881.	Plus \$30 per annum for rent. General line repairer.
3	Etang du Nord Village	15	P. Pelletier	400 00 do	Dec. 1, 1881.	2-wire loop.
4	do Lighthouse	1	T. O'Brien	50 00 do	do 1, 1881.	
5	Cap aux Meules		W. Leslie	50 00 do	Aug. 9, 1883.	
	do		A. LeBourdais, D. Supt.	500 00	do 17, 1880.	Plus \$1 per day when absent on duty.
6	House Harbour	8	P. L. Jocas	50 00	June 1, 1888.	House Harbour Agency discontinued in July, 1887, was re-opened in June, 1888.
7	Wolfe Island	28½	N. Clark	200 00	June 1, 1888.	
8	Grosse Isle	11	T. Turbide	50 00 or com'n.	do 20, 1881.	
9	Bird Rock		Miss McPhail	50 00	Feb. 18, 1882.	
10	Grand Entry	11				
	Totals	83½		1,450 00		

MAGDALEN ISLANDS TELEGRAPH SYSTEM.
CAPE BRETON SECTION.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Meat Cove (Cable Station).....	0	A. B. McDonald.....	420 00	Nov. 7, 1880	N.B.—The commission is 25 p. c. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Aspy Bay.....	10½	R. G. Zwicker.....	50 00 or com'n.	Aug. 1, 1882	
3	Neil's Harbour (½ way house. . .	15	M. McLeod.....	50 00 do	April 1, 1887	
4	Ingonish, North Bay.....	9	J. M. Burke.....	360 00	do 1, 1882	General repairer.
5	South Ingonish.....	10½	Miss A. A. Baker.....	50 00 do	July 1, 1889	
6	French River.....	23	John McDonald.....	50 00 do	April 1, 1889	
7	St. Ann's, South Bay.....	19	Miss C. Morrison.....	50 00 do	do 1, 1884	N.B.—This section is at present operated and maintained by the Western Union Telegraph Company, but at the cost of the Government. The agreement is for ten years (expiring 18th April, 1891), but can be cancelled on one year's notice.
8	Baddeck (Loop Line).....	13	Miss Dunlop.....	50 00 do	Jan. 1, 1882	
9	Englishtown.....	6	Miss Bingham.....	50 00 do	July 19, 1882	
10	Kelly's Cove (N. Campbellton) . .	2	Miss M. C. Campbell	50 00 do	April 1, 1885	
11	Big Bras d'Or.....	6	Mrs. E. Livingston.....	50 00 do	Jan. 1, 1889	
12	North Sydney.....	12½				Indian Brook agency opened in April, 1883, was discontinued and office opened at French Rivet.
	Totals.....	128½		1,230 00		

ESTIMATED COST OF ANNUAL MAINTENANCE OF MAGDALEN ISLAND SYSTEM.

Local lines. Salaries and repairs.....	\$4,100 00
Cable. Repairs, say.....	1,000 00
Total.....	\$5,100 00
Less probable revenue.....	1,400 00
Balance deficit.....	\$3,700 00

NOVA SCOTIA TELEGRAPH SYSTEM.
CAPE SABLE SECTION.

No.	STATIONS.	Inter- mediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Barrington.....	0	W. U. Tel. Co.'s Agent.	50 00 or com'n...	Dec. 18, 1883	N.B.—The commission is 25 p. c. upon all business to and from the offices; said commission guaranteed to be not less than at the rate of \$50 per annum.
2	Newelltown (including 1½ miles cable).....	11	Miss E. A. Smith.....	50 00 do ..	April 1, 1889	
3	Cape Sable Island Lighthouse (including ¼ mile cable).....	6¾	I. K. Doane	50 00 do ..	Dec. 18, 1883	
	Totals.	17¾		150 00		Newelltown office was closed from 30th June, 1888, till 1st April, 1889.

Estimated cost of annual maintenance :—

Required in Estimates for 1889-90.....	\$300 00
Estimated revenue do	150 00

LOW POINT, CAPE BRETON SECTION.

No.	STATIONS.	Inter- mediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Lingan.....	0	.....	50 00 or com'n.	.....	N.B.—The commission is 25 p. c. upon all business to and from the office; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Low Point Lighthouse.....	5	S. Peters.....	50 00 do	Aug. 1, 1881	
	Totals.....	5		100 00		

Estimated annual maintenance and repairs:—
Land line—Salaries and repairs..... \$150 00 Required in Estimates, 1889-90.

[1889]

EAST COAST SECTION.

N.B.—In connection with the Signal Service a land line 208 miles in length has been erected between Canso and Halifax for a bonus of \$16,000, and is now maintained and operated by the Western Union Telegraph Company without further cost to the Government.

MABOU-CHETICHMP, C. B., TELEGRAPH SYSTEM.

1	Mabou.....	0	Miss M. Finn.....	50 00 or com'n.	April 1, 1887	N.B.—The commission is 25 p. c. of the Government line tariff receipts, and is guaranteed to amount to not less than \$50 per annum.
2	Broad Cove.....	20	J. J. Campbell.....	do	Sept. 1, 1887	
3	Margaree Harbor.....	17	Mrs. M. A. McLellan.....	do	April 1, 1887	
4	N. E. Margaree (loop, 5 miles)	10	Miss B. M. Ross.....	do	Jan. 1, 1889	
5	Cheticamp.....	16	Mrs. M. Fiset.....	do	April 1, 1887	
	Totals.....	63				

Estimated cost of annual maintenance..... \$650 00 Required in Estimates, 1889-90.
Estimated revenue..... 150 00

GOVERNMENT TELEGRAPH SERVICE—Continued.

CHATHAM-ESCUMINAC, N.B., TELEGRAPH SYSTEM.

No.	STATIONS.	Inter- mediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
1	Chatham	Miles. 0	Great North-Western Telegraph Co.	\$ cts. 185 00	.....	This amount is paid for supervision of the line and office accommodation at Chatham.
2	Black Brook	5½	.....	50 00 or con'n.	.....	The commission is 25 per cent. of the Government line tariff receipts, and is guaranteed to amount to not less than \$50 per annum. Black Brook office has been closed since Feb., 1887, in consequence of the agent having resigned.
3	Bay du Vin	15	Miss M. Williston	50 00 do	March 1, 1885	
4	Escuminac	9½	Mrs. A. Lewis	50 00 do	Sept. 1, 1885	
5	Point Escuminac Lighthouse	12	H. W. Phillips, jun....	50 00 do	Feb. 1, 1885	
	Totals	42		385 00		
Estimated cost of annual maintenance, salaries and repairs				\$800 00 Required in Estimates, 1889-90.		
Estimated revenue				150 00		

BAY OF FUNDY, N. B., TELEGRAPH SYSTEM.

GRAND MANAN SECTION.

No.	STATIONS.	Inter- mediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
	<i>Long Eddy Cable Hut, to</i>	Miles.		\$ cts.		
1	Flagg's Cove.....	3	Mrs. C. C. Seely (D. Supt.)	420 00	Nov. 18, 1880	N. B.—The commission is 25 p. c. upon all business to and from the office ; said commission guaranteed not to be less than at the rate of \$50 per annum.
2	Woodward's Cove.....	6	Miss T. E. Milligan.....	50 00	Aug. 1, 1887	
3	Grand Harbour.....	2	E. Cameron.....	50 00 or com'n.	April 1, 1885	
4	Seal Cove.....	4½	F. A. Newton.....	50 00	do 1, 1887	
5	Southern Head Lighthouse.....	5½	D. G. McLaghlin.....	50 00	Jan. 1, 1883	
			O. McLaghlin.....	50 00	do 18, 1881	
			D. McKay, Repairer.....	60 00	May, 1, 1881	
	Totals.....	21		730 00		

[1889]

CAMPO BELLO SECTION.

	<i>Liberty Cove Cable Hut, to</i>	Miles.		\$ cts.	
1	Welchpool.....	7½	G. M. Mabce.....	100 00 or com'n.	Dec. 1, 1881
2	Eastport, Maine, U.S.A.....	½	J. Cushing.....	100 00	do 26, 1881
	Totals.....	8		200 00	

ESTIMATED COST OF ANNUAL MAINTENANCE AND REVENUE.

Land lines—Salaries and repairs.....	\$1,600 00
Cable—Repairs, probably.....	1,000 00
Total.....	\$2,600 00
Less probable revenue.....	700 00
Balance deficit.....	Required in Estimates, 1889-90. \$1,900 00

GOVERNMENT TELEGRAPH SERVICE—Continued.
CHICOUTIMI AND NORTH SHORE OF ST. LAWRENCE TELEGRAPH SYSTEM.
CHICOUTIMI SECTION.

Stations.	Inter- mediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	Memo.
	Miles.		\$ cts.		
1 Bay St. Paul.....	0	F. Boivin.....	50 00 or com'n* {	Previous to {	*The commission upon business is 25 per cent. of the tolls for the Government line ; the amount guar- anteed to be not less than \$50 per annum.
2 St. Urbain.....	9	A. Boivin.....	50 00 do	April 1, 1885 {	
3 La Cruche.....	37	{	50 00 do	do	
4 St. Alexis.....	31½		420 ..	May 15, 1887	
5 St. Alphonse de Bagotville.....	3		50 00 or com'n.	Jan. 1, 1889	
6 Chicoutimi.....	11½	A. Gauthier (Repairer).....	50 00 do	April 1, 1885	
		O. Pelletier.....	50 00 do	do	
		A. Simard.....	50 00 do	do	
		D. Boly.....	50 00 do	do 28, 1886	
Total.....	92		720 00		

MAINTENANCE.
Included with North Shore Section.
NORTH SHORE SECTION.

			50 00 or com'n* {	Previous to {	
1 Murray Bay.....	0	Mrs. F. Vincent.....	50 00 do	April 1, 1885	
2 Cap à L'aigle.....	4	N. Duchesne.....	50 00 do	June 1, 1888	
3 St. Fidèle.....	6	E. W. Tremblay.....	50 00 do	Previous to {	
4 Port au Persil.....	7	A. Brassard.....	50 00 do	April 1, 1885	
5 St. Siméon.....	4	D. Gaudin.....	50 00 do	May 1, 1889	
6 Baie des Rochers.....	12	G. Savard.....	50 00 do	Dec. 1, 1887	
7 Riv. aux Canards.....	17	G. Boullanne.....	50 00 do	June, 1887	
8 St. Etienne.....		M. McLaren (Repairer).....	420 00.....	Nov., 1886	
9 Tadoussac (14 mile cable).....	13	J. Savard.....	50 00 or com'n.	Dec. 1, 1887	
10 Bergeronnes.....	15	G. F. Caron.....	50 00 do	Nov., 1886	
11 Escoumains.....	12	M. Savard.....	50 00 do	do 1, 1888	
12 Petit Romaine.....	8	J. H. Topping.....	50 00 do	April, 1885	
13 Mille Vaches.....	8	R. C. Argall.....	50 00 do	do	
14 Portneuf Mills.....	11½	J. A. Puse.....	50 00 do	June 1, 1889	
			50 00 do	April, 1885	

Portneuf Mills office closed June, 1889

[illegible]

Total length of land line and cable, Murray Bay to Point aux Esquimaux 499 miles.

ESTIMATED COST OF ANNUAL MAINTENANCE.

Chicotimi and North Shore to Moisie	.....	\$7,500 00
Cable repairs	.....	500 00
		<hr/>
Required in Estimates for 1889-90	.....	\$8,000 00
Estimated Revenue	.....	2,200 00

GOVERNMENT TELEGRAPH SERVICE—Continued.

GROSSE ISLE QUARANTINE TELEGRAPH SYSTEM.

No.	STATIONS.	Inter- mediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Quebec.....	0	Great North-Western Telegraph Co.	185 00		This amount is paid for supervision of the line, and covers rent of pole line Quebec to L'Ange Gardien, for which \$35 per annum is charged.
2	L'Ange Gardien, St. Pierre ($\frac{3}{4}$ mile cable).....	13 4	C. Turcott...	50 00 or com'n	Mar. 1, 1885	
3	St. Pétronille	4 $\frac{1}{2}$	Mrs. Blais.	50 00 do	Oct. 1, 1887	This commission is 25 per cent. of the Government line tariff, and is guaranteed to amount to not less than \$50 per annum.
4	St. Laurent.....	6 $\frac{1}{2}$	M. Gobeil.....	50 00 do	Sept. 15, 1888	
5	St. Jean.....	7	P. Pouliot.....	50 00 do	July 1, 1888	
6	St. François (including 5 $\frac{1}{4}$ miles cable.....	6 $\frac{3}{4}$	M. Emond.....	50 00 do	Mar. 1, 1885	
7	Grosse Isle quarantine office.....	9	M. Langlois.....	50 00 do	Sept. 1, 1885	
8	do hospital.....	14	(Telephone).....			
	Total.....	52		485 00		

ESTIMATED COST OF ANNUAL MAINTENANCE.

Land line salaries and repairs.....	\$ 850 00
Cable repairs.....	300 00
Required in Estimates, 1889-90.....	\$1,150 00
Estimated Revenue.....	\$ 200 00

GOVERNMENT TELEGRAPH SERVICE.—Continued.

ONTARIO: PELEE ISLAND TELEGRAPH SYSTEM.

No.	STATIONS.	Intermediate Distances.	Agents.	Salaries per Annum.	Date of appointment.	MEMO.
1	Leamington		G. McR. Selkirk	\$50	Nov. 1, 1888.	Accountant and General Agent.
2	Point Pelee.....	12	} W. A. Grubb	Comsn. 25 p. c	do	The commission is upon the receipts for Government line.
	Cable to Island	8½				
3	North Dock	1½	C. B. Quick	do	do	
4	West Dock	5	A. M. McCormick	do	do	
5	South Dock	4½	F. B. McCormick	do	do	
	Total	31¾				

This line is operated with telephones.

Estimated cost of actual maintenance..... \$250

The revenue will about cover the maintenance expenditure.

GOVERNMENT TELEGRAPH SERVICE—Continued.

LINES IN THE NORTH-WEST TERRITORY.

QU'APPELLE-EDMONTON SECTION.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	Qu'Appelle.....	0	E. W. Warner.....	720 00	Jan., 1883..	
2	Fort Qu'Appelle.....	17	Miss A. Johnston.....	600 00	Mar. 1, 1885..	
3	Touchwood.....	46	A. Von Lindeburg.....	600 00	Nov 1, 1883..	
4	Humbolt.....	78	J. M. Anderson.....	720 00	May 1, 1884..	
5	Clarke's Crossing.....	55	R. J. Molloy, Agent.....	720 00	do 1, 1884..	
6	Henrietta.....	38	J. Harrington, Repairer.....	600 00	Jan. 1, 1886..	
7	Battleford.....	47	W. Salsbury, Repairer.....	720 00	Oct. 1, 1886..	
8	Fort Pitt.....	89	W. M. McDonald.....	720 00	May 1, 1889..	
9	Moose.....	45½	H. Sikes, Repairer.....	600 00	May 1, 1889..	
10	Saddle Lake.....	45	A. Guimont, Repairer.....	600 00	June 1, 1889..	
11	Victoria.....	37	J. F. Lake, Repairer.....	600 00	May 8, 1889..	
12	Fort Saskatchewan.....	49	W. E. A. Lequesne.....	600 00	July 1, 1888..	
13	Edmonton.....	24	W. C. Gillis, Repairer.....	720 00	Jan., 1887..	
			W. G. Ross, Agent.....	Com. 25 p. c.	Dec., 1886..	
			A. Taylor, Agent.....	720 00	Prev. to 1882	
			W. McKay, Repairer.....	720 00	May 1, 1886..	
	<i>Branch Line—</i>					
14	Clarke's Crossing.....	0				
15	Batoche (Loop 1 mile).....	42	L. P. O. Noel.....	720 00	Apr. 10, 1889..	
16	Duck Lake.....	9	H. McCleneghan.....	720 00	Aug. 1, 1888..	
17	St. Laurent.....	9	N. Potvin.....	720 00	June 1, 1889..	
18	Prince Albert.....	23	E. J. Rankin.....	720 00	March, 1887..	
19	Clarke's Crossing.....	0				
	Saskatoon.....	14				
	Edmonton.....	0				
	St. Albert.....	9				
	Total.....	676½	See note a.			

a. The Saskatoon and St. Albert branch lines are operated with telephones.

Estimated cost of annual maintenance—salaries, supplies and repairs, including the Wood Mountain Section—required in Estimates, 1889-90, \$20,000.

NORTH-WEST TELEGRAPH LINES.—WOOD MOUNTAIN AND FORT MACLEOD SECTIONS.

No.	STATIONS.	Intermediate Distances.	Operators.	Salaries per Annum.	Date of Appointment.	MEMO.
		Miles.		\$ cts.		
1	<i>Fort MacLeod Line—</i>					
2	Galt Junction.....	0				
3	Lethbridge.....	107				
3	McLeod.....	28½				
4	Fort MacLeod.....	½				The Fort MacLeod line has been leased to the North-West Coal and Navigation Co. at 5 per cent. per annum upon cost of construction.
	<i>Wood Mountain Line—</i>					
1	Moose Jaw.....	0	H. Rutherford.....	240 00		
2	Wood Mountain.....	90½	J. S. Macdonald.....	720 00		The Wood Mountain line is operated directly, as part of the Government Telegraph Service.
	Total.....	226½		960 00		

GOVERNMENT TELEGRAPH SERVICE IN BRITISH COLUMBIA.

Office.	Inter- mediate Distances	Names.	Positions.	Salaries per month.	Date of Appointment.	MEMO.
	Miles.					
Ashcroft Station.....	0					This line is now operated by the Canadian Pacific Railway Co. for the Government. The arrangement being terminable at any time.
Cache Creek.....	4					
Clinton.....	26					
Bridge Creek.....	53					
Soda Creek.....	78					
Quesnelle.....	54½					
Stanley.....	48					
Barkerville.....	13					{ This line was leased for 99 years to Messrs. J. A. Laidlaw and J. Wilson, on the 30th October, 1887.
	276½					
<i>Branch.</i>						
New Westminster.....	18					
Ladner's Landing (½ mile cable).....						
Total	294½					

Estimated cost of maintenance, including general repair of line, \$6,500, required in Estimates, 1889-90.

APPENDIX No. 14.

TABULAR STATEMENTS

SHOWING THE DATES OF THE

OPENING AND CLOSING OF NAVIGATION

AT THE

PRINCIPAL PORTS OF CANADA,

ON THE SEABOARD AND ON THE GULF, RIVER, AND LAKES ON THE
ST. LAWRENCE; ALSO PORTS WHICH ARE ALWAYS OPEN.

APPENDIX No. 14.

Ref. No. 103,880.

STATEMENT of the Closing of Navigation in the Fall of 1888, and of the Opening in the Spring of 1889.

Name of Port.	Location.	Closed in 1888.	Opened in 1889.	Remarks.
Charlottetown, P.E.I.....	Gulf St. Lawrence	Jan. 12, 1889	March 30..	Spring tides, 9 to 10 feet; neap tides, 6 to 8 feet. Depth at end of pier, 22 feet.
Georgetown do	do	Feb. 25, 1889	do 6..	Spring tides rise 5½ feet; neaps 4 feet.
Pictou, N.S.	do	Jan. 14, 1889	do 14..	Neap tides rise about 4½ feet. Springs 6 to 7 feet.
Sydney do	do	Feb. 8, 1889	April 4..	
Shediac, N.B.	do	December 12..	do 18..	Spring tides rise, 4 feet; neaps 2½ feet.
Campbellton do	Baie des Chaleurs	November 18..	do 25..	Spring tides rise, 10 feet; neaps 6 feet.
Bathurst do	do	Closed Nov. 21, opened again and finally closed Dec. 5.		
P.Q.	Gulf St. Lawrence	November 23..	do 25..	Spring tides rise 7 feet; neaps 4 feet.
Perceé, Gaspé Basin do	do	December 27..	do 20..	Spring tides rise about 5 feet.
Tadoussac do	River St. Lawrence	do 5..	May 1..	Rise and fall of tide about 6 feet.
Quebec do	do	November 24..	March 15..	Spring tides rise 23 feet. From Sea.
Sorel do	River Richelieu	December 13..	April 16..	Inland Navigation. Rise and fall of tide from 13 to 18 feet.
St. John's do	do	November 24..	do 18..	
Montreal do	River St. Lawrence	December 14..	do 27..	
Three Rivers do	do	November 28..	do 20..	
Kingston, Ont.	Lake Ontario	Jan. 19, 1889	do 2..	
Bellefleur do	do	November 25..	do 13..	
Port Hope do	do	December 10..	do 9..	
Toronto do	do	do 20..	March 15..	
Port Stanley do	Lake Erie	Feb. 9, 1889..	do 15..	
Port Dover do	do	December 12..	April 23..	
Windsor do	Detroit River			Navigation never closed here.
Sarnia do	Lake Huron	December 17..	April 15..	
Goderich do	do	November 24..	do 8..	
Kincardine do	do	December 4..	March 26..	
Owen Sound do	Georgian Bay	do 4..	April 14..	
Collingwood do	do	do 1..	do 22..	
Warton do	do	November 28..	do 18..	
Sault Ste. Marie do	Lake Superior	December 4..	do 17..	
Port Arthur do	do	do 29..	do 13..	
Winnipeg, Man.	Red River	November 15..	do 25..	

No. 2.—STATEMENT showing some of the Ports in the Dominion which are open to Navigation the whole Year.

Name of Port.	County.	Province.	Depth of water at low water.	Remarks.
Annapolis	Annapolis	Nova Scotia.	15 to 20	In very severe winters thin ice forms, but screw steamers could always enter.
Barrington	Shelburne	do	12 to 20	At anchorage. Wharves dry at low water.
Digby	Digby	do	18	About 10 feet at end of steamboat pier.
Halifax	Halifax	do	20 to 30	At wharves, 70 to 100 feet in harbour.
Liverpool	Queen's	do	7	On bar, at Brooklyn, 24 feet.
Lockeport	Shelburne	do	8	
Lunenburg	Lunenburg	do	12	
Parrsboro'	Cumberland	do		Dry in harbour at low water.
Shelburne	Shelburne	do	40 to 60	
Yarmouth	Yarmouth	do	13	
St. Andrews	Charlotte	New Brunswick.	14	In inner harbour.
St. John	St. John	do	20	At entrance of harbour, 60 feet in harbour.
St. Stephens	Charlotte	do	6	30 feet at the ledge, 4 miles below the town.
*Tadoussa c.	Saguenay	Quebec	30 to 50	
Windsor	Essex	Ontario		Ferry boats cross Detroit River all winter.

* See remarks respecting Tadousac Harbour in Appendix No. 8 of General Report 1867-82.

Victoria, Nanaimo, Burrard Inlet and all other ports in British Columbia, up to Skena River are always open. New Westminster is liable to be closed 7 to 15 days. See telegram No. 34,027 from the Hon. J. W. Trutch, 3rd May 1883.

Tides in British Columbia.—At Victoria ordinary springs rise from 7 to 10 feet; neaps 5 to 8 feet; at Nanaimo ordinary springs rise 14 feet; neaps 11 feet; at New Westminster ordinary springs rise 7 feet; neaps 4 feet; at Hastings, Burrard Inlet, ordinary springs rise 16 feet; at Port Moody, ordinary springs rise 10 to 12 feet; neaps 5 to 6 feet. See telegram from Hon. J. W. Trutch, 25th October, 1883, No. 39,810.

APPENDIX No. 15.

STATEMENTS.

1ST.—CONTRACTS LET BY THE DEPARTMENT.

2ND.—PROPERTY PURCHASED BY THE DEPARTMENT.

3RD.—PROPERTY LEASED BY OR TO THE GOVERNMENT.

DURING THE FISCAL YEAR ENDED 30TH JUNE, 1889.

APPENDIX No. 15.

Ref. No. 104,411.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 2nd September, 1889.

SIR,—I have the honour to enclose the following statements which are required for insertion in the annual report for 1888–89, viz.:—

No. 1.—Statement of Contracts let by this Department during the fiscal year ended 30th June last.

No. 2.—Statement of Property purchased and sold by this Department during the same period.

No. 3.—Statement of Property leased to and by this Department during the same period.

I have the honour to be, Sir,
Your obedient servant,
F. X. R. SAUCIER.

A. GOBEIL, Esq.,
Secretary Department of Public Works.
Ottawa.

No. 1.—CONTRACTS let by the Department of Public Works of Canada, from the 30th June, 1888, to the 30th June, 1889.

Works.	Names of Contractors.	Date of Contract.	Amount.
			\$ cts.
PUBLIC BUILDINGS.			
<i>Government House, Parliament and Departmental Buildings.</i>			
New Departmental Building, Wellington street—Hot water heating apparatus.....	Garth & Co	Aug. 16, 1888	15,500 00
New Departmental Building, Wellington street—Iron staircases.....	A. Charlebois.....	Sep. 7, 1888	11,040 90
New Departmental Building—Three passenger and 1 freight elevators.....	J. Fensom.....	Oct. 10, 1888	39,877 00
New Departmental Building—Smoke stack in connection with hoist machinery.....	do	Dec. 14, 1888	700 00
New Departmental Building—Ten vault doors.....	J. & J. Taylor.....	Mar. 13, 1889	2,500 00
Parliament and Departmental Buildings—Supply of coal.....	G. F. Thompson.....	July 5, 1889	12,858 53
Parliament and Departmental Buildings—Removal and putting up of winter sashes and blinds from and to windows.....	L. Hortie.....	Nov. 14, 1888	1,606 50
Parliament and Departmental Buildings—Removal of snow.....	P. McKenna.....	do 23, 1888	539 00
Parliament and Departmental Buildings—Covering steps for winter.....	W. Millions.....	Dec. 1, 1888	185 00
			187

No.—é.—CONTRACTS let by the Department of Public Works—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS— <i>Continued.</i>			\$ cts.
<i>Government House, Parliament and Departmental Buildings—Concluded.</i>			
Parliament and Departmental Buildings—Supply of ice.	C. A. Christin.....	Mar. 2, 1889	p. block 10
do Building—Covering with copper flat roofs between Library and main building, and skylight.....	Douglas Bros.....	July 16, 1888	1,396 00
do Library—Covering with copper sloping roofs	do	Aug. 17, 1888	5,100 00
Rideau Hall—Covering 2 roofs with galvanized iron....	I. Hortie.....	July 10, 1888	p. sq. 13 00
do Clearing snow.....	J. Bruce.....	Nov. 27, 1888	595 00
do Supply of ice.....	D. N. Charlebois.	Mar. 2, 1889	p. foot 04
<i>Nova Scotia.</i>			per lamp
Amherst Post Office—To light with incandescent light..	Electric Light Co.....	Aug. 2, 1888	p. night 04
do Public Building—Supply of coal.....	Acadia Coal Co.	Aug. 8, 1888	254 04
Annapolis do Erection.....	Rhodes, Curry & Co..	June 17, 1889	12,497 00
Antigonish do Supply of coal.....	J. Kenna.....	Aug. 8, 1888	67 50
Baddeck do do	J. McDonald.....	do 8, 1888	98 00
Halifax Public Buildings do	Glace Bay Mining Co.	do 24, 1888	598 40
do do Alterations to appraiser's office.	J. Mulroney.....	July 27, 1888	125 00
Nappan Experimental Farm—Residences for superintendent and workman, barn and stabling.....	Rhodes, Curry & Co..	Aug. 15, 1888	13,900 00
New Glasgow Public Building—Supply of coal.....	J. Muir & Sons.....	do 8, 1888	145 00
North Sydney Post Office do	C. A. Robertson.....	do 8, 1888	185 00
Pictou C. H. and M. H. do	Acadia Coal Co.	do 8, 1888	207 05
Sydney (South) C.B. Public Building—Erection.....	Connor & Donald.....	Dec. 12, 1888	13,977 75
Truro Public Building—Supply of coal.....	J. Kenna.....	Aug. 8, 1888	45 00
Windsor do do	Acadia Coal Co.	do 8, 1888	226 68
Yarmouth do do	do	do 8, 1888	200 00
<i>Prince Edward Island.</i>			
Charlottetown Public Building—Supply of water.....	Water Com. of Ch'town	Mar. 14, 1889	p. an. 225 00
do do do coal.....	C. Lyons.....	Aug. 8, 1888	527 78
Montague Post Office—Supply of coal.....	J. McEvoy.....	do 8, 1888	74 87
Summerside do do	J. Read.....	do 8, 1888	297 91
<i>New Brunswick.</i>			
Bathurst Post Office—Supply of coal.....	Gillespie & Sadler....	Aug. 8, 1888	383 01
Dalhousie Public Building—Erection.....	A. G. McKenzie.....	July 31, 1888	10,489 00
Frederickton do Supply of coal.....	R. P. & H. F. Starr..	Aug. 27, 1888	383 57
Moncton do do	Acadia Coal Co.	do 8, 1888	259 43
Newcastle do do	Gillespie & Sadler....	do 8, 1888	419 49
Portland do do	R. P. & W. F. Starr..	do 27, 1888	30 44
St. John do do	do do	do 27, 1888	3,183 61
St. Stephen do do	C. H. Clerke.....	do 8, 1888	81 00
Sussex do do	R. P. & W. F. Starr..	do 27, 1888	221 57
Woodstock do do	C. H. Clerke.....	do 8, 1888	255 17
do do Clock for tower.....	E. Chanteloup.....	June 14, 1889	1,900 00
<i>Quebec.</i>			
Aylmer Post Office—Hot water heating apparatus.....	E. B. Butterworth....	Jan. 30, 1889	659 00
do do Fittings, furniture and shed.....	D. B. McDonald.....	Mar. 13, 1889	2,300 00
Coaticook Post Office—Hot water heating apparatus....	W. Clendinneng & Son	Feb. 28, 1889	900 00
do do Fittings.....	T. T. Shurtleff.....	Mar. 7, 1889	1,100 00
Grosse Isle Quarantine Station—Sundry works.....	G. Beaucage.....	Aug. 20, 1888	1,500 00
Hull Post Office—Supply of coal.....	G. F. Thompson.....	do 8, 1888	274 21
Joliette Public Building—Drain, heating apparatus and Post Office fittings.....	G. Beaucage.....	Nov. 23, 1888	3,359 50
do do Additional work on drain.....	do	Jan. 11, 1889	1,170 00

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS— <i>Continued.</i>			\$ cts.
<i>Quebec—Concluded.</i>			
Montreal Post Office—Cleaning down and pointing with oil cement rear elevation.	L. Cousineau.....	July 3, 1888	1,000 00
do Public Buildings—Supply of coal	W. F. Torrance.....	Aug. 22, 1888	4,339 21
do Post Office—Supply of electric current for 237 lamps	"Gazette" Print'g Co.	Nov. 29, 1888	per lamp p.an 16 00
do do Removal of snow from roof during winter.	L. Barré.....	Dec. 14, 1888	100 00
Quebec Public Buildings—Supply of coal	Madden & Ellis.....	Sept. 4, 1888	1,284 29
do Marine Hospital—Fuel wood.	Lawrence & Broomer..	do 6, 1888	1,650 00
Sorel Post Office—Supply of coal.	T. Bellefeuille.....	Aug. 8, 1888	287 50
St. Jérôme Post Office—Heating apparatus.	E. Chanteloup.....	Apl. 2, 1889	1,200 00
do do Additional works.	J. Fitzpatrick.....	May 17, 1889	1,109 10
do do Fittings.	do	June 15, 1889	1,125 00
St. John's Public Building—Supply of coal.	Bissett & Donaghy....	Aug. 8, 1888	188 00
do do Incandescent electric light'g	C. F. Beauchemin & Co	Dec. 18, 1888	p.an. 250 00
St. Vincent de Paul Penitentiary—Fuel wood; red spruce, maple and birch.	Dufresne & Mougénais	Jan. 3, 1889	1,221 00
Three Rivers Public Buildings—Supply of coal.	Z. Marchand.....	Aug. 8, 1888	557 22
<i>Ontario.</i>			
Almonte Public Building—Erection.	R. Cameron.....	June 11, 1889	13,395 00
Amherstburg do Supply of coal	J. G. Mullen.....	Aug. 8, 1888	243 25
Barrie do do	J. S. Johnston.....	do 8, 1888	250 00
do do Incandescent electric light'g	Barrie Elec. Light Co.	Nov. 30, 1888	p.an. 250 00
Belleville do Supply of coal	The Downey Co.....	Aug. 8, 1888	373 75
Berlin do do	Kloepper & Co.....	do 8, 1888	91 96
Brampton do Erection.	Perry, Mason & McCulloch.....	Oct. 23, 1888	16,350 00
do do Substituting pressed to common brick for facing external walls.	do do.....	Nov. 23, 1888	500 00
Brantford do Supply of coal	Thos. T. Elliott.....	Aug. 8, 1888	286 64
Brockville do do	Hugh McCullough.....	do 8, 1888	261 00
Cayuga do Interior fittings and vault doors.	T. & R. Draper.....	Dec. 3, 1888	1,370 00
do do Hotwater heating apparatus	A. Clark.....	do 13, 1888	470 00
Chatham do Supply of coal	T. Elliott.....	Aug. 8, 1888	235 65
Clifton do do	Coulson & Robinson....	do 8, 1888	220 00
Cornwall do do	Grant & Conroy.....	do 8, 1888	256 00
Cobourg Customs Offices—Additions and alterations.	Henderson & Henderson	Dec. 15, 1888	8,825 00
Galt Public Building—Supply of coal.	J. Malcolm.....	do 15, 1888	179 33
Gananoque Custom House—Supply of coal	Rathbun Co.....	Aug. 8, 1888	192 00
do do and Post Office—Granolithic footpath.	R. Forsythe.....	do 30, 1888	450 00
do Post Office—New drain.	G. Wilson.....	do 21, 1888	200 00
Gananoque Public Buildings—Incandescent lighting.	Gananoque Electric Light Company.....	May 3, 1889	p. an. 235 00
Goderich do Erection	Tambling & Jones.....	Nov. 12, 1888	12,063 00
Guelph Post Office—Hot water heating apparatus.	J. Sim & Co.....	do 24, 1888	1,508 00
Hamilton Drill Hall do do	Adam Clark.....	Sept. 12, 1888	3,163 00
do Public Building—Supply of coal.	Æ. Mackay's Sons.....	Aug. 8, 1888	954 00
do Drill Hall—Changing position of coils in Armories.	A. Clark.....	Dec. 22, 1888	270 00
Lindsay Public Building—Erection	P. Navin.....	July 5, 1888	16,497 00
do Post Office—Fittings	do	Feb. 11, 1889	1,600 00
do Public Building—Heating apparatus.	E. Woods.....	Apr. 13, 1889	1,549 00
London do Supply of coal.	Bowman & Co.....	Aug. 8, 1888	441 60
Napanee do Additional works.	G. Newlands.....	Nov. 10, 1888	1,309 00
do do Heating apparatus.	do	Jan. 21, 1889	2,000 00
do do Interior fittings.	do	Jan. 25, 1889	2,000 00
Orangeville do Supply of coal.	J. Morrison.....	Aug. 8, 1888	135 45

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.		Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS— <i>Concluded.</i>				\$ cts.
<i>Ontario—Concluded.</i>				
Ottawa Experimental Farm—Kitchens, sheds and fences for cottages Nos. 2 and 3		Tobin & O'Keefe.....	July 10, 1888	460 00
do do Greenhouses		Beaudet & Desjardins..	do 30, 1888	5,212 60
do do Sheeting walls and ceiling stable		W. Stuart.....	do 25, 1888	297 00
do do Heating apparatus for museum and offices and for greenhouses and seed stores		Garth & Co.....	Oct. 15, 1888	3,150 00
do do 1 cottage and stabling in rear of Supt.'s residence.		Tobin & O'Keefe.....	do 23, 1888	2,750 00
do do Laboratory fittings and furniture		W. Stuart.....	Nov. 2, 1888	1,009 72
do do Light to museum, laboratory and offices, Springfield Gas Company's gas machine.....		Garth & Co.....	Dec. 24, 1888	600 00
do do Plumbing at laboratories..		W. Stuart.....	Feb. 18, 1889	355 00
do New Departmental Building, Fisheries Exhibition, Printing Bureau and Major's Hill Park—Supply of water to		Corporation City of Ottawa.....	Apr. 11, 1889	p. ann. 2,500 00
do Printing Office (formerly occupied by McLean, Roger & Co.)—Repairs		Ls. Gratton.....	July 24, 1888	146 85
do Government Printing Bureau—Substituting terra-cotta lumber bricks to common brick in arched ceilings.....		J. E. Askwith.....	Nov. 21, 1888	1,725 00
do Government Printing Bureau—Substituting granolithic to wooden floors in press room and basement		do	Jan. 30, 1889	5,875 00
do Government Printing Bureau—Main stairs		do	Apr. 24, 1889	2,000 00
do do 2 freight elevators		do	do 10, 1889	6,600 00
do do Fittings in ground floor room of Stationery office		do	June 24, 1889	1,881 00
Pembroke Public Building—Erection		Munro, Beatty & Grieve	July 21, 1888	16,700 00
Peterborough Post Office—Supply of water		Peterborough Water Co	Aug. 2, 1888	p. an. 75 00
do Public Building—Supply of coal		do Gas Co.	do 8, 1888	148 43
Port Hope do do		Brown & Hemming...	do 8, 1888	190 00
Prescott do Erection		Ward, Cairns & Steel..	Nov. 7, 1888	19,210 00
do do Carrying lean-to to same height as main building		do do	June 28, 1889	3,682 00
Stratford do Supply of coal		T. Elliott.....	Aug. 8, 1888	302 85
St. Catharines do do		Eli Gasby.....	do 8, 1888	151 88
do do do		H. O'Loughlin.....	do 8, 1888	151 60
St. Thomas do do		E. A. Lewis.....	do 8, 1888	364 00
Toronto do do		S. Crane & Co.....	do 8, 1888	2,448 08
Trenton do Increasing height of tower		W. Alford.....	Nov. 6, 1888	750 00
do do Heating apparatus.....		do	Feb. 20, 1889	1,950 00
do do Post Office fittings and changing vault doors..		do	Mar. 19, 1889	975 00
Windsor do Supply of coal		J. & T. Hurley.....	Aug. 8, 1888	420 25
<i>Manitoba.</i>				
Brandon Public Building—Erection		Jno. Hanbury	June 18, 1889	31,500 00
Stony Mountain Penitentiary—Machinery for new steam laundry		Garth & Co.....	July 25, 1888	7,125 00
do do Residences for chaplains and surgeon		Tobin & O'Keefe.....	Jan. 24, 1889	16,500 00
St. Paul's Industrial School Buildings—Erection.....		Madden & Bruce.....	May 13, 1889	18,955 00
Winnipeg Public Buildings—Supply of coal		N. W. Coal & Transp. Co	Aug. 8, 1888	1,702 50
do do do		Dom. do	do 8, 1888	2,165 80

No. 1.—CONTRACTS let by the Department of Public Works, &c.—Continued.

Works.	Names of Contractors.	Date of Contract.	Amount.
PUBLIC BUILDINGS—Continued.			\$ cts.
North-West Territories.			
Battleford—N.W.M.P. Barracks—Repairs.	J. N. Pomerleau.	Oct. 6, 1888	1,843 00
do do Buildings—Repairs to woodwork	Oliver & Schnieder.	do 9, 1888	1,376 06
do do do Painting.	D. Arcand.	do 9, 1888	402 00
Calgary Barracks—4 hot-air furnaces.	N. D. McDonald & Co.	Sep. 26, 1888	1,492 00
do Court House—Erection.	J. G. McCallum	Nov. 8, 1888	26,150 00
Fort Macleod—Stables for N.W.M.P.—Erection.	Williams & Willoughby	do 2, 1888	5,800 00
Indian Head Experimental Farm Buildings—Erection.	I. R. Reilly.	do 5, 1888	18,780 00
do do Gurney's new Harris furnace.	J. W. Smith.	May 3, 1889	495 00
Regina Riding Hall—Erection.	J. Stewart.	Nov. 3, 1888	23,500 00
do N.W.M.P. Commissioner's House—New Harris-Gurney furnace.	J. W. Smith.	do 6, 1888	225 00
do Lient-Governor's Residence—Erection.	W. Henderson.	Mar. 19, 1889	26,950 00
do "White Farm" Indian Industrial School buildings—Erection.	Williams & Willoughby	May 14, 1889	35,100 00
British Columbia.			
Kamloops—Industrial School buildings—Erection.	J. D. Ross.	June 4, 1889	8,450 00
Kuper Island—do do.	W. Rockett.	May 27, 1889	7,950 00
New Westminster Penitentiary—Warden's Residence—Erection.	Ackerman Bros.	Apr. 23, 1889	9,938 00
HARBOURS AND RIVERS—DREDGING AND DREDGE VESSELS.			
Nova Scotia.			
Arisaig—Extending and repairing pier.	S. O'Donoghue.	May 7, 1889	4,750 00
Cheticamp Wharf—Construction.	A. McKinnon.	June 10, 1889	2,700 00
Digby—Erection of waiting room and office on pier.	E. Bates.	May 16, 1889	315 00
East River, Sheet Harbour—Ballast Wharf—Construction.	S. D. Oakes.	Jan. 9, 1889	1,775 00
New Brunswick.			
Campbellton Ballast Wharf—Construction.	Gibson & Odell.	Apr. 23, 1889	6,999 00
Edgett's Landing do do.	Wallace & Derry.	Jan. 15, 1889	4,386 00
Mizzonette Point—Public Landing—Construction.	P. & F. Therrieau.	Feb. 19, 1889	1,700 00
St. Louis Wharf—Construction.	G. & J. Robertson.	Nov. 6, 1888	1,800 00
Quebec.			
Baie St. Paul—Cap aux Corbeaux—Crib-work.	Cinon & Tremblay.	Sep. 10, 1888	4,994 00
New Carlisle—Additional length to wharf.	Heney & McDonald.	Dec. 17, 1888	6,499 00
Portage du Fort—Village Bridge—Painting 2 coats.	J. Coyne.	Apr. 6, 1889	0 14 per sq. yd.
Ontario.			
Chatham—McGregor's Creek—Pile protection work.	Flook & Babcock.	Dec. 27, 1888	8,695 00
Kingston Dry Dock—Construction.	Bancroft, Connolly & Connolly.	Apr. 23, 1889	Schd. rates.
Ottawa River—Re-construction of Suspension Bridge.	Rousseau & Mather.	Nov. 15, 1888	28,875 00
Penetanguishene—Works in the harbour.	Porter & Reed.	do 28, 1888	18,000 00
Port Arthur—Further length of breakwater.	Kirby & Stewart.	Oct. 30, 1888	124,000 00
River aux Puces—Sheet piling.	Odette, Lyons & McHugh.	Sep. 18, 1888	1,987 00
Sault Ste. Marie—Crib-work.	Lefebvre & Parker.	Oct. 29, 1888	9,985 00
Toronto—Improvement of eastern entrance to harbour.	Murray & Cleveland.	May 21, 1889	Schd. rates.

No. 1.—CONTRACTS let by the Department of Public Works, &c.—*Continued.*

Works.	Names of Contractors.	Date of Contract.	Amount.
DREDGE VESSELS AND PLANT.			\$ cts.
Maritime Provinces—Construction of 3 centre dumping scows for dredges in.....	T. Robley	Apr. 11, 1889	4,200 00
Maritime Provinces—Construction of 2 centre dumping scows for dredge "New Dominion".....	I. J. Olive.....	June 18, 1889	1,840 00
Montreal and Quebec Ship Channel—Supply of coal for dredging plant.....	H. Dobell & Co. and Carbray & Routh ...	Ap. 18-27, '88	Schd. rates.
TELEGRAPH LINES AND SERVICE.			
Manicouagan and Godbout Rivers—Bridle path and 3 protection huts between.....	N. A. Comeau.....	Aug. 25, 1888	900 00
Margaree—Loop line to north-east—Construction	J. M. Smith	June 25, 1888	236 00
N. W. Territories—Supply of oats for horses, at 8 stations	A. Macdonald, R. J. Molloy and J. M. Campbell	Sep. 13, 1888	Schd. rates.
do Humboldt and Qu'Appelle—Re-poling telegraph line between.....	E. Grundy.....	July 31, 1888	do
Pelee Island and Mainland—To operate line between...	The Bell Telephone Co.	Jan. 31, 1889	20% comm.
Victoria to Cape Beale (<i>via</i> Bonilla Point)—Building line between	T. D. Conway	June 28, 1889	95 00
Wolfe and Howe Islands Cables—Building land lines in connection with	North American Tel. Co	Jan. 21, 1889	pr. stat. mile 1,000 00

F. X. R. SAUCIER.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 2nd September, 1889

Date of Conveyance.	Vendors.	Purchasers.	Description of Property.	For What Purpose.	Area.	Price.
July 16, 1888.	Archiepiscopal R. C. Corporation of Quebec.	Her Majesty	Site of old Parliament Building, Mountain Hill, Quebec.	Release of <i>route constituée</i> .	17 $\frac{1}{2}$ ths of an acre.	\$ 74,074 00
do 18, 1888.	W. H. Plummer <i>et ux</i> .	do	Land and water lot, Sault Ste. Marie.	Wharf.		1 00
Aug. 3, 1888.	Her Majesty.	Ven. E. Gilpin.	Old Halifax Penitentiary buildings and grounds.	No longer required by Department.		10,000 00
July, 27, 1888.	Mrs. Elizabeth Smart.	Her Majesty	Part of Cadastral Lot No. 253, Lachine, Que.	Site for public building.	100 ft. by 150 ft.	2,000 00
Aug. 15, 1888.	John Clarke.	do	Parcel of land at Brampton, Ont.	do	48 ft. 8 in. by 80 ft. 8 in. by 80 ft. 6 in.	4,000 00
July 7, 1888.	Rev. P. Gladu, O. M. I. and Lake Temiscaming Col. Ry. Co.	do	Wharf and part of lot 20, 2nd range, Township Duhamel.	Harbour and river works.		3,000 00
Aug. 20, 1888.	Her Majesty.	Corporation of Town of Goderich	Lot west of Beach Street and south of harbour quay.	Compensation for claim.	5,070 sq. ft.	Special grant
Sept. 27, 1888.	Helen H. Coates.	Her Majesty	Land in Almonte, Ont.	Site for public building.	72 ft. by 81 ft. by 108 75 in.	6,250 00
Oct. 5, 1888.	Ann McLaurin.	do	Mortgage on lot corner of Metcalfe and Wellington Streets, Ottawa.	Discharge of mortgage.		4,000 00
Aug. 28, 1888.	Ed. Caron.	do	Beauport, Que., wharf.	Harbour and river works.		800 00
Oct. 1, 1888.	C. E. Dawson.	do	Tug "M. P. Davis."	Dredging.		2,000 00
July 23, 1888.	P. Holt & W. Proudfoot.	do	Part of lots 21, 22 and 23, block 59, Brandon, Man.	Site for public building.	75 ft by 63 ft.	3,150 00
Aug. 10, 1888.	Scottish Ont. and Man. Land Co.	do	do	do		2,240 00
Nov. 16, 1888.	G. S. Brush.	do	Tug "Sensation"	Dredging.		2,600 00
do 2, 1888.	Wid. Adeline McKellar.	do	Lots 1, 2 and 3, Strathroy, Ont.	Site for public building.	90 ft. by 60 ft.	2,400 00
do 30, 1888.	J. Carruthers and Corporation of the City of Kingston.	do	Two parcels of land, Kingston, Ont.	Kingston dry dock.	1st parcel 127,661 sq. ft.	19,500 00
Mar. 27, 1888.	Hon. F. Clemow <i>et ux</i> . & J. Clarke <i>et ux</i> .	do	East $\frac{1}{2}$ of Lot No. 12, south side Queen St., Ottawa.	Fisheries exhibition building.	2nd parcel 51,567 sq. ft.	1 00
Oct, 27, 1888.	Hon. D. A. Smith & R. B. Angus.	do	Parts of lots 6, 7, 8, 9 and 10, block 32, Vancouver, B.C.	Site for public building.	33 ft. by 99 ft.	1,500 00
July 12, 1888.	J. W. Peppett <i>et ux</i> .	do	Strip of land corner Main and Peppett Streets, North Sydney, C.B., N.S.	To complete site for public building.	9,750 sup. ft.	4,000 00
					675 sup. ft.	97 50

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No. 2.—STATEMENT of Property purchased or sold by the Department of Public Works during the Fiscal Year ended 30th June, 1889—*Continued.*

Date of Conveyance.	Vendors.	Purchasers.	Description of Property.	For what Purpose.	Area.	Price.
Sept. 10, 1888.	Exchequer Court.	Her Majesty	Part N $\frac{1}{2}$ lot 8 and S $\frac{1}{2}$ lot 8, Township of Portland, County of Ottawa.	River du Lièvre works.		\$ cts.
Jan. 15, 1889.	Kilbourn & Lymburner.	do	Parts of Park lot X, N. of Bury Street and A B C and portions of 1 and 2.	Owen Sound Harbour improvements.		6,000 00
do	C. Paynter, jun., <i>et ux</i> .	do	Lot No. 3 and N $\frac{1}{2}$ of lot No. 2.	do		1,806 00
do	J. C. Griffiths <i>et ux</i> .	do	Lots 1, 2 and 3 and parts of lots 6 and 7 sub-divisions of lot VIII.	do		561 00
do	Goldie & McCulloch <i>et al.</i>	do	Part of S E part lot 11, West Street.	do		7,500 00
do	C. Paynter, sen. <i>et ux</i> .	do	Lot 1 and S $\frac{1}{2}$ lot 2, N of Paynter Street.	do		900 00
do	J. Corbet <i>et al.</i>	do	Piece of land, eastern portion of lot XI.	do		928 00
June 20, 1889.	J. Lemon.	do	Lot 4, sub-division lot VIII.	do		1 00
Jan. 13, 1889.	Mrs. D. Earl.	do	Parts of lots 3 and 4, sub-division lot IX.	do		5,250 00
do	Mrs. Creighton and Mrs. Earle.	do	do 8 and 9 do VIII.	do		100 00
Mar. 19, 1889.	O. Chailfoux.	do	Lot 525 and part of lot 524, St. Hyacinthe, Que.	Site for public building.		600 00
do	Pickels & Mills.	do	Lot corner Main and Railway Sts, Annapolis, N.S.	do	482 $\frac{3}{4}$ by 47 $\frac{8}{16}$ by 50 ft.	6,500 00
do	J. Buckler <i>et ux</i> .	do	Piece of land adjoining preceding one.	To complete above site.	15 feet wide.	3,300 00
do	Mrs. widow G. Pelletier.	do	Cadastral lots 266 (one parcel) and 267 (two parcels) at Fraserville, Que.	Site for public building.	22,500 sup. ft.	700 00
do	The Lake Temiscamingue Colonization Ry. Co.	do	Long Sault Wharf and parcel of land in connection therewith.	Harbours and Rivers Works	Piece of land 50 ft. by 100 ft.	3,500 00
						800 00

F. N. R. SAUCIER.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 2nd September, 1885,

No. 3—STATEMENT of Property leased to and by the Department of Public Works during the fiscal year ended 30th June, 1889.

Date of Lease.	Lessor.	Lessee.	Property Leased	For what purpose used.	Duration of Lease.	Rent Payable.
Sept. 1, 1888	J. M. Cairns	Her Majesty	Town lot No. 13, N. side of James street, Prescott, Ont.	Post Office contract.	1 year.	\$ cts. 1 00 p. annum
Feb. 8, 1889	Her Majesty	North American Telegraph Co.	Bath and Amherst Island Telephone Line.	Operation of the same.	21 years.	1 00 do

F. X. R. SAUCIER.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 2nd September, 1889.

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APPENDIX No. 16.

LIST OF SOME OF THE ACTS OF PARLIAMENT
PASSED AT THE SESSION OF 1889,
AND HAVING REFERENCE TO
THE DEPARTMENT OF PUBLIC WORKS,
OR WORKS UNDER ITS CHARGE.

APPENDIX No. 16.

Ref. No. 101,487.

LIST of some of the Acts, passed at the Third Session of the Sixth Parliament of Canada, prorogued on the second day of May, 1889, and having reference to the Public Works Department, or works under its charge.

Subject.	Full Title of the Statute.	Chapter.	Page in Statute Book.
Sums granted to Her Majesty for the financial year ending 30th June, 1890, and the purposes for which they are granted.	An Act for granting to Her Majesty certain sums of money required for defraying certain expenses of the public service, for the financial years ending respectively the 30th June, 1889, and the 30th June, 1890, and for other purposes relating to the public service.	1	3
Relief of the Corporation of the Town of Cobourg (Port Hope) Rice Lake Road.	An Act for the relief of the Corporation of the Town of Cobourg.	6	58
Expropriation of lands.	An Act respecting Expropriation of Lands.	13	74
Collection of slideage and boomage dues.	An Act respecting the collection of certain Tolls and Dues therein mentioned.	19	103

N.B.—Order in Council, 11th February, 1889, determines how the “day” shall be reckoned in connection with the management and working of the Graving Dock at Esquimalt, B.C.—page xcvii.

F. X. R. SAUCIER.

DEPARTMENT OF PUBLIC WORKS,
OTTAWA, 9th September, 1889.

APPENDIX No. 17.

NATIONAL ART GALLERY.

CURATOR'S REPORT.

APPENDIX No. 17.

NATIONAL ART GALLERY.—CURATOR'S REPORT.

Ref. No. 103,873.

NATIONAL ART GALLERY,
OTTAWA, 27th November, 1889.

SIR,—I have the honour to report the following additions to the Gallery received during the fiscal year ended 30th June, 1889:—

Water color, "British Columbian Forest," by L. R. O'Brien, P.R.C.A.

Water color, "A Wanderer in the Wood Lands," by D. Fowler, R.C.A.

Oil painting, "Landscape," by Franklin Brownell.

The above pictures were purchased by the Government.

The interest taken in the Gallery by the public is shown by the attendance book, no less than 14,241 visitors having registered their names during the year.

I have the honor to be, Sir,

Your obedient servant,

A. GOBELL, Esq.,

JOHN W. H. WATTS,

Secretary, Department of Public Works,
Ottawa.

Curator.

APPENDIX No. 18.

OFFICERS OF THE DEPARTMENT.

APPENDIX

Members, Commissioners and Assistant Commissioners of the Board of Works,
Architects of the Department of

Chairman, Commissioners and Ministers.			Assistant Commissioners and Deputy Ministers.		
Name.	From	To	Names.	Date of Appointment.	
<i>Under Statute 4-5 Vic., Cap. 38, Cor- poration of Board of Works.</i>					
Hon. H. H. Killaly, Chairman.....					
D. Daly..... S. B. Harrison..... J. Davidson.....	}Members	Dec. 29, 1841	Oct. 3, 1844		
<i>New Board of Works.</i>					
Hon. H. H. Killaly, Chairman.....					
D. Daly..... W. H. Draper..... W. Morris..... D. B. Papineau.....	}Members..	Oct. 5, 1844	June 8, 1846		
<i>Under Statute 9 Vic., Cap. 37, etc.</i>					
Hon. W. B. Robinson, Chief Commis- sioner.					
	July 4, 1846	Mar. 10, 1848	Hon. Chas. Eus. Cas- grain, Assist. Com- missioner.....	Aug. 1, 1846	
E. P. Taché	do ..	Mar. 11, 1848	Nov. 26, 1849	Hon. M. Cameron, Asst. Commissioner	Mar. 11, 1848
J. Chabot	do ..	Dec. 15, 1849	Mar. 31, 1850	Jno. Westenhall, Asst Commissioner	Feb. 2, 1850
W. H. Merritt	do ..	April 20, 1850	Feb. 11, 1851	Hon. Jos. Bourret, Asst. Commissioner	April 20, 1850
J. Bourret	do ..	Fob. 15, 1851	Oct. 27, 1851	Hon. H. H. Killaly, Asst. Commissioner	Feb. 15, 1851
John Young	do ..	Oct. 28, 1851	Sept. 22, 1852		
J. Chabot	do ..	Sept. 23, 1852	Jan. 26, 1855		
F. Lemieux	do ..	Jan. 27, 1855	Nov. 25, 1857		
C. Allevy	do ..	Nov. 28, 1857	Aug. 1, 1858		
L. H. Holton	do ..	Aug. 2, 1858	do 6, 1858		
L. V. Sicotte	do ..	do 6, 1858	Jan. 10, 1859	Samuel Keefer, Asst. Commissioner	May 6, 1859
John Rose	do ..	Jan. 15, 1859	June 12, 1861		
Jos. Cauchon,	Commissioner.	June 15, 1861	May 23, 1862		
U. J. Tessier	do ..	May 24, 1862	do 27, 1863		
L. T. Drummond	do ..	do 28, 1863	July 23, 1863		
M. Laframboise	do ..	July 23, 1863	Mar. 29, 1864	Toussaint Trudeau, Asst. Commissioner	Mar. 15, 1864
J. C. Chapais	do ..	Mar. 30, 1864	June 30, 1867		
<i>Under Statute 31 Vic., Cap. 12.</i>					
Hon. Wm. McDougall, Minister....					
	July 1, 1867	Oct. —, 1869	Toussaint Trudeau, Deputy Minister..	May —, 1868	
Hon. H. L. Langevie, C.B.	do	Dec. 8, 1869	Nov. 5, 1873		
Hon. Alexander Mackenzie	do ..	Nov. 7, 1873	Oct. 16, 1878		
Sir Charles Tupper, C.B., K.C.M.G., Minister.....		Oct. 17, 1878	May 20, 1879		
Sir Hector L. Langevin, C.B., K.C.M.G., Minister.....		May 20, 1879		G. F. Baillairgé, Deputy Minister..	Oct. 4, 1879

No. 18.

and of the Ministers, Deputy Ministers, Secretaries, Chief Engineers and Chief Public Works, from 1841 to 1889.

Secretaries.		Chief Engineers.		Chief Architects.	
Names.	Date of Appointment.	Names.	Date of Appointment.	Names.	Date of Appointment.
Thomas A. Begly...	Aug. 17, 1841	Samuel Keefer....	Aug. 17, 1841	F. P. Rubidge, Architect and Asst. Engineer..	Dec. 15, 1841
Thomas A. Begly, under Act estab- lishing Dept. of Public Works.....	Sept. 25, 1847				
.....		John Page	Oct. 31, 1853		
Toussaint Trudeau..	Dec. 13, 1859				
Frederick Braun....	Mar. 8, 1864				
.....		G. F. Baillairgé, Asst. Chief En- gineer.....	July 5, 1871	Thos. S. Scott....	Feb. 7, 1872
{ S. Chapleau	Oct. 4, 1879	H. F. Perley.....	Nov. 25, 1880	Thos. Fuller	Oct. 31, 1881
{ F. H. Ennis.	Nov. 4, 1880				
{ A. Gobeil.....	Jan. 23, 1885				

APPENDIX No. 19.

REVISED RECORD,
ENGINEERS AND THEIR ASSISTANTS EMPLOYED
ON
PUBLIC WORKS,
CANADA,
1779 to 1890.

N.B.—This Record does not contain the names of the
Government Railway Engineers.

An Alphabetical Record of the most important Works on which Engineers have
reported, or been employed, will be published in a subsequent report.

G. F. BAILLAIRGÉ,
D. M. P. W.

OTTAWA, December, 1889.

APPENDIX No. 19.

ENGINEERS

Employed on Public Works, Canada, 1779 to 1890, so far as ascertaind, exclusive of Railways.

Engineers.	Works.	Dates of Employment, &c.
Allison, J. C.	Assistant Engineer, Harbours, Maritime Provinces. Resident Engineer, St. John, N.B., Works and Surveys, King's, Annapolis, Digby, Yarmouth, Shelburne, Queen's, and Lunenburg Counties, Nova Scotia.	Oct., 1883-88. July, 1889-90.
Anderson, W. P.	Chief Engineer, Department of Marine and Fisheries. Member Canadian Society of Civil Engineers.	23rd Oct., 1874-89. . 20th Jan'y., 1887.
Armstrong, Capt. Charles Logie.	Lake St. Peter, dredging, &c.	1857-67.
Arnoldi, John Roger.	Chief Mechanical Engineer. Superintendent dredge vessels and dredging, Ontario and Quebec. Mechanical Engineer, Public Buildings, Ottawa, &c. Member Canadian Society of Civil Engineers.	6th Dec., 1859. 1880-89. 7th July, 1883-89. 25th June, 1887.
Asterbrooks, Captain.	Engineer Royal Artillery, first attempt to place a cable for Suspension Bridge at Ottawa.	1826.
Atherton, Charles.	Lake St. Peter, dredging, in charge of surveys and investigations. Specification of dredge vessels, &c.	1842-43. 9th Sept., 1842.
Austin, G. F.	Chantry Island breakwater, Lake Huron, &c. Harbour surveys, Maritime Provinces. River Ottawa bridge site survey at Portage du Fort, &c.	1875-82. 1883-84. 1885-86.
Aylmer, J. A.	Lachine Canal enlargement, engineering staff. St. Anne Lock do Resident Engineer, new locks and canals, River Trent—construction. Member Canadian Society of Civil Engineers.	July, 1873-79. do 1880-81. June, 1882-88. 20th Jan'y., 1887.
Baddeley, Capt., R.E.	Commissioner with Hon. John Macaulay, Surveyor General, and John S. Cartwright, under Act of Upper Canada Parliament, for ascertaining practicability of making a navigable communication between the Ottawa and Lake Huron. They reported to Sir George Arthur, subjoining thereto the report of David Taylor, David Thompson and William Hawkins, the persons they employed to survey the route. <i>See</i> subsequent reports on surveys by Walter Shanly and James Stewart, in 1857-58, and by Thomas C. Clarke, 1859-60. <i>See</i> Appendix 30, pages 837 to 847, by G. F. Baillairgé in General Report of Public Works, 1867-82.	4th March, 1837.
Baillairgé, Charles.	Architect and Engineer, Public Works, Quebec and Ottawa Report on new gaol, Quebec. Joint Architect, Ottawa Parliament Buildings. City Engineer, Quebec. New treatise on Stereometry. First medal of Society of Arts and Manufactures, Paris, and thirteen medals awarded by Russia, Spain, Italy, &c., 1874 to 1884.	1860-63. 11th Feb., 1863. 1863-65. 6th Oct., 1866-90. 15th March, 1874.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Baillairgé, Charles	Princess Louise Docks, Quebec, plans submitted, &c. Inspecting Engineer North Shore Railway, Quebec to Montreal, and Piles Branch, River St. Maurice. Fellow Royal Society of Canada. Member of Canadian Society of Civil Engineers. Inspecting Engineer of Quebec and Lake St. John Railway for Municipal Council of Quebec. Member of the Society of Sciences, Arts and Manufactures, London, Eng. Member of "l'Académie des Palmiers," France.	1874-76. 1875-81. 7th March, 1882. 24th Feb., 1887. 1883-89. Dec., 1886. 12th May, 1889.
Baillairgé, George Fred..	Canals, harbours, roads, Provinces of Quebec and Ontario. First General Report on Public Works, with James Stewart, C.E. Laid out the first slides built on the River St. Maurice, at Grand'-Mère and Shawenegan Falls. Surveys—Piers below Quebec, River l'Assomption, &c. Resident Engineer, Junction and Williamsburg Canals. Ordnance canals, survey and plans of hydraulic lots at Cascades, Split Rock, Cedars, and Côteau du Lac, with estimates. Chambly and Beauharnois Canals, surveys and claims. Saguenay, Metapediae, Gaspé and Temiscouata Roads, &c. Second General Report on Public Works. Cornwall, Beauharnois Canal weirs, &c. Channel sounded, River St. Lawrence, between Quebec and Montreal. Baie Verte Canal Survey, proposed route and design. Location and design of lock, Lakes Muskoka and Rousseau. Slides and booms, Rivers Saguenay, St. Maurice and Trent. Assistant Chief Engineer Public Works, Canada. Proposed Cedars Canal and River St. Lawrence survey. Fort Frances Lock, Rainy Lake, and survey harbour works, Quebec. Superintending Engineer Canals, Province of Quebec. Deputy Minister Public Works, Canada. Third General Report on Public Works. New Map of Canada, showing its resources, climate, &c., &c., and comprising the various Arctic discoveries up to. Classified collections of specifications of the Public Works of Canada, chiefly from. Member of Council, Canadian Society of Civil Engineers.	22nd Sept., 1844. Up to 1849. Sept.-Oct., 1852. 1846-1853. 1853-1856. 1857. 1849-1864. 1858 to 1866. 1st July, 1867. 1856-1870. 1868-1869. Aug., 1870-73. June, July, 1866. 1863-78. 5th July, 1871-79. 1872-78, 1875-76. 1875-76. 22nd June, 1877-79. 4th Oct., 1879-90. 1867-82. 1890. 1841 to 1890. 1889-90.
Baird, N. H.	Member of Mechanics Institute of Civil Engineers, England Projected Murray Canal, Lake Ontario. Report on Beauharnois Canal project. do on River Trent navigation project. Locks 134 by 33 feet; 5 feet water on sills. Work commenced 1837, and completed chiefly in 1844. do on Welland Canal enlargement. Work commenced 30th November, 1824. Canal first opened 30th November, 1829. Original wooden locks 110 by 22 feet, with 7½ feet of water on sills. Died, Aug., 1849, at Brattleboro', Vt. Reports on Roads and Bridges, Eastern Townships, P.Q.	1831. 1833. 1835. 1833-36. 1837. 1846-47-48.
Barclay, E. J.	Engineering Staff, St. Peter's Canal enlargement, Cape Breton.	1875-81.
Barrett, Alfred.	Report on inland navigation between Lakes St. Francis and Ontario, also on Rapide Plat Canal project. Grand River Navigation—Report. Lachine Canal, 1st enlargement, and St. Ours lock and dam, &c. Surveys River St. Charles and bridges, River Ottawa, at Vaudreuil, &c. Died, 18th July, 1849, at Montreal.	1830. 7th Oct., 1843. 1841. 1843-48.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Barry, P. J. S.	Royal Engineer Corps. Report and estimate proposed St. Peter's Canal, Cape Breton, N.S. Canal commenced by Nova Scotia Government. do completed by Dominion Government. This canal connects Great Bras d'Or Lake and St. Peter's Bay, on the Atlantic. It is 2,400 feet in length, and has 1 tidal lock of 200 × 49½ × 18 feet depth of water on sills of lock, which has 4 gates. It was enlarged by Dominion Government, 1875 to Cost of construction. \$156,523 32, to Cost of completion and enlargement 496,797 80, to	31st Aug., 1853. 1854. 5th Aug., 1869. 30th April, 1871. 30th June, 1867. 30th June, 1882.
	Total.	\$653,321 12
	(See General Report, Public Works, 1867-82.)	
Bayfield, Admiral Henry W., R.N.	In charge of the Admiralty Survey of the River and Gulf of St. Lawrence. Made reports respecting the deepening of Lake St. Peter.	1817-60. 1831-35-46.
Beaudry, J. A. U.	Engineering Staff, Public Works, harbour surveys, P.Q. Member Canadian Society of Civil Engineers.	1883. 20th Jan., 1887
Bélanger, Ernest.	Assistant Engineer, harbour surveys, P.Q.	1884-87.
Belcher, A. J.	Assistant Engineer, new canal works, River Trent.	1882-88.
Belcher, Thos. Deaves. .	Superintending Engineer, River Trent, canals, locks, slides, dams and booms, from Trenton, Lake Ontario, up to Lake Scugog.	July, 1873, to 1884.
Bell, Andrew.	New Carillon Canal on north side, also new slide on south side of the River Ottawa, and dam across the River Ottawa, Resident Engineer. Employed by various parties, Arnprior, &c.	June 1870, to Nov. '85 1885-1889.
Bell, Capt.	Superintending dredging ship channel, Lake St. Peter. Died fall of 1856.	1852-56.
Bellingham, A.	Assistant Resident Engineer, Lachine Canal, third enlargement, upper division. Left service 1st October, 1878.	1873 to 1878.
Bender, E. P.	Engineering Staff, Public Works, harbours, Province of Quebec, &c.	1880 to 1887.
Bennett, William.	Resident Engineer, Esquimalt Graving Dock, Vancouver Island, British Columbia. Member Canadian Society of Civil Engineers.	1st Sept., 1883, to Jan., 1888. 24th Feb., 1887.
Berlinguet, Thos.	First employed on survey Princess Louise Docks at Quebec. Survey, Harbour of Three Rivers, &c., P.Q. Assistant, Hydrographic Survey, Pointe aux Trembles to Cap Charles. Resident Engineer, River St. Maurice, and Engineer Harbour Commissioners, Three Rivers, &c. Resident Engineer, lock and dam, River Yanaska, and various works at Sorel, River St. Francis, River Nicolet, &c. Member Canadian Society of Civil Engineers.	1875-76. 1881-82. July, 1883. 1884-89. 1888-90. 24th Feb., 1887.
Bertrand, Joseph Têtu. .	Engineering Staff, Public Works, Ottawa, and harbour surveys, etc. Student Canadian Society of Civil Engineers.	1884-89. 20th Jan., 1887.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Bertrand, L. N.	Engineering Staff, Public Works, surveys, Quebec and Ontario.	1884.
Boivin, Elzéar.	Harbour Survey, S. W. side, Lake St. John, P. Q.	1889.
Bolton, Major D., R. E..	Description of dam at Long Island, on the Rideau Canal, built in 1836	1839.
Boswell, St. G.	Engineering Staff—Graving dock at Lévis, and Princess Louise Basins, at Quebec.	1876-88.
	Member of Council, Canadian Society of Civil Engineers..	1889.
	Resident Engineer, Quebec Harbour Works.	1889.
Boulay, Philéas.	Engineering Staff, canals, &c.	15th March, 1870-71.
	Assistant, Cedars' canal survey.	1872-76.
	Lachine Canal enlargement.	1877-80.
	At head-quarters, Department Railways and Canals, &c..	1880-89.
Boyd, John Edward	Resident Engineer, European and North American Railway, by Government of New Brunswick.	1856-60.
	Chief Engineer and General Superintendent of E. and N.A. Railway.	Dec. 1860-67.
	Assistant Engineer, Department Public Works, Ottawa...	1st Sept., 1867-71.
	Chief Engineer of Government Railways, Prince Edward Island.	10th May, 1871-75.
	Resident Engineer, North Shore Railway, by Government of Quebec.	1876 and 1879.
	Engineer in charge of works, Maritime Provinces.	May, 1880, to June, 1881.
	Engineering Staff at Head-quarters, Ottawa.	1881-83.
	Resident Engineer, Princess Louise Basin, Quebec, and graving dock at Lévis, for Public Works Department. Died at Quebec and interred at Ottawa, Nov., 1887.	Sept., 1883, to Nov., 1887.
Breen, Thomas.	Engineering Staff, Public Works, harbours, &c., Province of Quebec	1882-89.
	Member Canadian Society of Civil Engineers.	25th June, 1887.
Brophy, G. Patrick.	Engineering Staff, Public Works.	July, 1867.
	Assistant Superintendent, Ottawa slides and booms.	6th July, 1873.
	Superintendent do do	22nd July, 1875-89.
	J. B. Brophy acted as Superintendent, 1st July, 1879, to 1880.	
Brophy, John Byrne	Assistant Superintending Engineer, Ottawa slides and booms.	1st Jan., 1876.
	Superintending Engineer, Ottawa slides and booms.	1st July, 1879.
	Resident Engineer on C.A.—C.P.C. Railway Division.	1st April, 1880.
	Divisional Engineer, Cape Breton Railway.	28th June, 1886.
Brotherton, A. S.	Engineering Staff, Public Works, harbour surveys, &c., below Quebec.	1881-82.
Browne, Edward.	Report on back-waters, Newcastle District.	18th Feb., 1858.
Brown, Gustavus A.	Assistant Engineer, Public Works, Maritime Provinces..	1st July, 1872-88.
	Resident Engineer, St. John, N.B., Public Works and surveys, Prince Edward Island, and the Counties of Cumberland, Colchester, Hants and Halifax, Nova Scotia.	July, 1889-90.
Bruyères, Capt., R.E.	Report on claim in connection with Saut-Ste.-Marie Canal, constructed on Canadian territory prior to 1802, by Messrs. McTavish, Frobisher & Co., on behalf of the "North-West Fur Trading Company"	Prior to 23rd Dec 1803.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Bruyères, Capt., R.E....	This claim was made by Messrs. Forsyth, Richardson & Co., and by Messrs. Parker, Gerrard, O'Gilvy & Co., of Montreal, 15th April, 1802, and by John Mure, of Quebec, 17th April, 1802. Report on progress of new canal at Cascades, to replace the two first canals built, on the same peninsula, between 1779 and 1783 See Report Canadian Archives, by Douglas Brymer, Ottawa See By, Clarke, Donatti, Finlay, Mann, King and Twiss, herein.	16th Jan., 1805. 1886.
Burnett, Thomas.....	British Engineer, made survey and plans of Lachine Canal. Canal commenced, 17th July, 1821. do opened in August, 1824. Depth, $4\frac{1}{2}$ feet water on lock sills. Stone locks, 100 by 20 feet.	Spring of 1820.
Burwell.....	Survey of Goderich Harbour.....	1827.
By, Lieut.-Col., R.E....	Report on Cascades, Mill Rapids and Split Rock Canals. Superintending Engineer of Rideau Canal, Bytown (Ottawa) to Kingston Rideau Canal, commenced Report on Canadian canals and defences of Canada do on the Rideau Canal First steamboat "The Plumper" passed through the Rideau Canal..... Rideau Canal completed..... 126 $\frac{1}{2}$ miles long, with 47 locks of 134 by 33 feet, and 5 feet water on sills of locks. Total ascent from Ottawa to Upper Rideau Lake, 292 feet 3 inches. Total descent from Upper Rideau Lake to Kingston, 165 feet 4 inches. Ottawa River, below Lake Ontario, per Royal Engineers, 126 feet 11 inches. Ottawa River, above the sea, 110 feet. Total cost of Rideau Canal, according to Ordnance documents, including cost of land and pay of establishment, \$3,911,701.47. The Rideau Canal was under the superintendence of the following Royal Engineers, until it was transferred by the Imperial to the Canadian Government, viz. :— Major Bolton, Lieut.-Col. Thompson, Lieut.-Col. Ford, Lieut.-Col. Chater and Mr. Harvey The management of the Ottawa and Rideau Canals was transferred to the Department of Public Works by an Order in Council J. S. Killaly, first Superintending Engineer, appointed by Canadian Government..... J. D. Slater, second Superintending Engineer, appointed by Canadian Government..... F. A. Wise, third Superintending Engineer, appointed by Canadian Government.....	24th April, 1805. Sept., 1826. 21st Sept., 1826. 1826. 6th July, 1827. 29th May, 1832. Aug., 1832. 1832 to 1857. 3rd March, 1857. 1857 to 1858. Oct. 1858 to Oct., 1872 Oct. 1872-1890.
Carroll, Cyrus.....	Engineering Staff, Public Works, harbours, Ontario	1884-86.
Cartwright, John S., R.E.	Commissioner with Hon. John Macaulay, Surveyor General of Upper Canada, and Capt. Baddeley, R.E., for ascertaining practicability of a navigable route between the Ottawa and Lake Huron..... See Baddeley, Hawkins, Macaulay, Taylor, Thompson, according to an Act of the Parliament of Upper Canada, of 4th March, 1837. See App. 30, pp. 837 to 847, by G. F. B., Public Works Report, 1867-82.	1837.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Casey, W. R.	Sub-Engineer on the Germantown and Philadelphia Railway and on the New York Crofton Water Works.	Prior to 1834.
	Assistant Engineer on the Long Island Railway, N.Y.	do
	do Chambly Canal.	1834.
	Chief Engineer of Railway, St. John to Laprairie, from its commencement to its completion	1834-36.
	This was the first narrow-gauge railway constructed in Canada, its rails were of flat iron; passenger cars resembled those now used but shorter and narrower.	
	Made numerous surveys both as Assistant and Chief Engineer in various parts of Upper and Lower Canada and several of the United States	Prior to 1842.
	Cedars Canal route proposed on north side of River St. Lawrence. Plan, profile and estimate.	1842.
Chaloner, Charles E.	Public Works, surveys, Manitoba and North-West Territories, &c.	1882-83.
	Assistant of R. Steckel, Geodetic survey, River St. Lawrence, between Montreal and Quebec, and River Richelieu, &c.	1884-89.
	Member Canadian Society of Civil Engineers.	24th Feb., 1887.
Champion, A. J.	Engineering Staff, Public Works, Maritime Provinces . . .	1873-74.
Charbonneau, Maxime. .	Engineering Staff, Public Works, Manitoba and North-West Territories, River North Saskatchewan.	1885-86.
	Died February, 1887.	
Chater, Col.	Royal Engineer, succeeded Col. Ford, R.E., as Superintending Engineer of Rideau Canal, under Imperial Government.	
Cimon, Simon	Engineering Staff, Public Works, harbours, Quebec.	1881-87.
	Resigned 11th Aug., 1887. Elected member of Charlevoix for House of Commons, 23th Sept., 1887.	
	Member Canadian Society of Civil Engineers.	20th Jan., 1887.
Clark, C.	Engineering Staff, New Canal Works, River Trent.	1882 to 1886.
Clarke, Isaac Winslow. .	Deputy Commissary General. Superintendent, Cascades, Split Rock and Côteau du Lac, Ordnance canals.	1809-22.
	Died 7th July, 1822.	
	For details respecting these works, see Col. Gother Mann and Lieut. Col. John By, &c., also General Report on Public Works, 1867. These canals were not built under the French, as stated according to tradition at that time.	
Clarke, Thomas C.	Ottawa River navigation to Lake Huron, survey.	1859.
	Report on projected ship canal.	2nd Jan., 1860.
Cliff, John.	Superintendent harbour works, Montreal.	1832 to 1845.
Clowes, Samuel.	Rideau Canal, proposed works	1823.
	Welland Canal do	1824.
	Galops, Rapide Plat, Farran's Point and Cornwall Canals, General Report and Estimates submitted	1826.
Cole, Capt., R.E.	Consulting Engineer, Cornwall Canal construction	1833.
	Canal commenced in 1835, opened December, 1842. Completed June, 1843.	
Cole, Major P., R.E. . .	Report on causes of floods, River St. Lawrence, Montreal. .	29th June, 1841.
Conway, John.	Engineering Staff, Lachine Canal enlargement	1871-83.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Conway, John.....	Assistant Engineer, St. Gabriel Basin, L.C..... Engineer, electric light apparatus, Lachine Canal, Montreal.....	1883-86. 1886-89.
Cornell, J.....	Engineering Staff, Public Works, at Montreal, Lachine Canal enlargement.....	1843-47.
Coste, Louis.....	Engineering Staff, Pub. Wks., Harbours, &c., Prov. Ont. and Quebec..... Member Canadian Society of Civil Engineers.....	1884-89. 20th Jan., 1887.
Coutlée, Chas. R. F.....	Graduated at Royal Military College, Kingston, Ontario..... Engineering Staff, Canadian Pacific Railway..... Engineering Staff, International Railway. Short Line of C.P.R., from Montreal to Province Line, thence across State of Maine to New Brunswick..... Student Canadian Society of Civil Engineers..... Engineering Staff, projected canal, Lake St. Francis to Lake St. Louis.....	June, 1886. Oct., 1886, to Feb., 1887. May, 1887; to Oct., 1888. 22nd March, 1888. 1st May, 1889-90.
Crawford, William.....	Survey, Beauharnois Canal, enlargement projected..... Assistant Engineer, Welland Canal, deepening to 14 feet..... Resident Engineer Saut-Ste.-Marie Canal, Canada..... First survey made in 1852, by S. Keefer, Chief Engineer of Public Works. Member Canadian Society of Civil Engineers.....	1872 to 1876. 1st June, 1886, to 1st August, 1887. August, 1887-88. 20th Jan., 1887.
Crawley, Capt. H. O., R.E.	Reports on Baie Verte Canal project, to unite the Bay of Fundy with the Gulf of St. Lawrence.....	19th Jan., 1843, and 14th and 19th Mar., 1843.
Cunningham, Granville C.	Resident Engineer, Prince Edward Island Railways, Assistant Engineer in charge of harbours, &c., Prince Edward Island, for Public Works Department..... Member of Council Canadian Society of Civil Engineers.....	April, 1875 to 1878. 1889.
Curran, Veysie.....	Assistant Resident Engineer, Southern Division, Welland Canal enlargement..... Asst. Resident Engineer, Saut-Ste.-Marie Canal, Canada..	Nov., 1873, to 1st Jan., 1889. 1st March, 1889.
D'Amours, J. W.....	Engineering Staff, Public Works, British Columbia, Victoria, &c. Survey mouth of Fraser River, British Columbia.....	1885.
Dawson, Simon J.....	River St. Maurice, slides and booms..... Route Lake Superior to Fort Garry, survey commenced... Work commenced..... Col. Wolseley and troops passed..... Work completed for passage of immigrants.....	1852-57. 1857. 1867. 1870. 1871.
Déniel, Emile.....	Grenville Canal enlargement..... Panama Canal, Central America..... Member Canadian Society of Civil Engineers..... Chief Assistant of Thos. Monro. Examination of projected canal routes, Lake St. Francis to Lake St. Louis.....	Sept., '72, to Oct., '80. Jan., Feb., March, 1888. 20th Jan., 1887. 1889.
Denison, Lieut W., R.E.	Description of Rideau Canal dams, locks, &c., and of bridges across the River Ottawa.....	1839.
Dérome, J. B.....	Piers, &c., Province of Quebec, Public Works Department.	10th July, 1864.
Derbshire, Stewart.....	Engineering Staff, employed on harbours and roads.....	1873-77.
Desbarats, G. J.....	Carillon New Canal, slide and dam, River Ottawa..... Headquarters, Department of Railways and Canals, Ottawa	Aug., 1879. Jan., 1885-89.

ENGINEERS employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Des Brisay, L. P. W....	Engineering Staff, Public Works, Calgary, Bow River bridge	18th March, 1887, to 30th April, 1888.
Desjardins, C.	On survey ship channel between St. Roch and Ile aux Coudres	1881.
Dickinson, John	Appointed Commissioner to enquire into cause of floods between Montreal and Quebec	4th Oct., 1873.
Dickinson, Jos. E., M.A., Trinity College, Dublin	Assistant Engineer, Northern Division, Welland Canal, 2nd enlargement	15th July, 1874, to 30th Dec., 1879.
Donatti, L.	Deputy Assistant Commissary General. Superintendent, Cascades, Split Rock and Côteau du Lac Ordnance Canals	July, 1820.
	For details, see Bruyères, By, Clarke, Mann, Twiss, &c.	
Doré, J. E.	Engineering Staff, canals, &c., P. Q.	1884-86.
	St. Zotique road dyke, protection wall on north shore of Lake St. Francis	1884-85.
	Left service	1st Jan., 1886.
Douglas, R. C.	Engineering Staff, Ottawa—canals, &c.	July, 1872-89.
Drummond, —, R.E....	Superintending Engineer, first Suspension bridge, Ottawa.	1826.
Duberger, C. C.	Assistant Engineer, Public Works, harbour surveys, north shore River St. Lawrence, below Quebec	1881.
Duchesneau, A.	Engineering Staff, Lachine Canal enlargement, &c., Montreal Division	July, 1872-81.
	Superintending Engineer's office, Montreal	Nov., 1881-89.
Dumais, Horace	Harbour surveys, Lake St. John	1889.
Duvernety, Lieut.-Col. Henry	Royal Staff Corps, Imperial Government. Superintending Engineer, construction of Grenville Canal, &c., under Imperial Government	1819-24.
	Report on Grenville Canal	20th Nov., 1820.
	Report on Chute à Blondeau and Carillon Canals	26th Dec., 1827.
	Grenville Canal	1827-33.
	<p>The Grenville, Chute à Blondeau and Carillon Canals, on the north side of the River Ottawa, were designed and constructed by the Royal Staff Corps of Engineers for the Imperial Government. The records respecting these canals were kept in the Ordnance Office at Montreal, and were destroyed by fire in 1852. It appears, however, that the "Grenville Canal" was completed in 1829, the "Chute à Blondeau", in 1832, and the "Carillon", in 1833, and that on the 24th of April, 1834, they were opened, and the steamer "St. Andrew" made the first passage through them.</p> <p>These old canals were 8 miles in length, with 11 locks of 107 to 136½ feet, by 32 to 33 feet and 6 feet depth of water on sills of locks. Cost not ascertained.</p> <p>They were placed under control of Department of Public Works, Canada, 3rd March, 1857.</p> <p>They have since been enlarged, and are now 6½ miles in length, with 7 locks of 200 by 45 feet and 9 feet depth of water on lock sills.</p> <p>The enlargement was commenced in 1871 and completed 27th May, 1882.</p>	

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Duvernety, Lieut.-Col. H.	Cost of enlargement, up to 30th June, 1882, \$975,142.54. Report and estimates, proposed canal and lock at Ste. Anne, north side of River Ottawa, instead of old wooden lock between Ile Perrot and Vaudreuil, built in 1816 by the St. Andrew's Steam Forwarding Company, for steamers of 20 horse power.....	13th Dec., 1831.
Eads, Jas. B., U.S.....	Report on Toronto Harbour proposed improvements Died, 8th March, 1887.	14th March, 1882.
Fafard, Eugène.....	Engineering Staff, Public Works, harbour surveys, P.Q....	1888.
Fafard, F. X.....	do do do	1881.
Faga, J. M.....	do do do Ontario	Sept., 1874-80.
Fairbanks, Charles.....	Survey and report, &c., projected St. Peter's Canal, Cape Breton, N.S.....	1850.
Fanshaw, Col., R.E.....	Commissioner Rideau Canal.....	1828.
Farijana, F. C.....	Proposed Cedars Canal survey on north shore of River St. Lawrence..... House Harbour, Magdalen Islands, Gulf of St. Lawrence.. Harbours, Ontario, &c	1872-73. 1874-75. 1875-81.
Fellowes, Charles L.....	Served on examination of part of Dawson Route..... Engineering Staff, surveys, &c., Welland Canal, 2nd enlargement..... Assistant Engineer, north division, Welland Canal, 2nd enlargement	1869. 1870-76. 1st July, 1876, to 30th May, 1882.
Finlay, John.....	Deputy Assistant Commissary General. Superintendent in charge of construction, Lachine Canal.. Gives length and number of locks, &c., of the Cascades, Split Rock and Côteau du Lac Canals in a letter dated. <i>See Canadian Archives, under D. Brymner's custody, at Ottawa, page 121, vol. 47.</i>	1823 to 1829. 7th June, 1828.
Fleming, Peter.....	Recommends dredging River Richelieu so as to avoid building lock and dam at St. Ours..... Dredging of River Richelieu commenced	1829. 1830-31.
	Consulting Engineer, Williamsburgh and Cornwall Canals.. Engineer employed by Commissioners of Chambly Canal. These Commissioners were appointed by Act, 3rd Geo. IV, Cap. 41:—Samuel Hatt, W. Macrae, Gabriel Marchand, R. Boileau, Timothée Franceur, 1829.	1834.
	Survey, plans and estimates submitted to Commissioners.. Probable cost estimated at £54,167 6 0. This estimate submitted to an officer of the Royal Engineers, who reported thereon at the instance of Sir James Kemp, and estimated the probable cost at £96,745. This last estimate was submitted to Messrs. Hanlon and Hopkins, Civil Engineers, who estimated the probable cost at £60,300.	1830.
	Canal commenced	Oct., 1831.
	Canal opened throughout, in the spring of..... Length, 12 miles; 9 locks, 118 to 125 by 23½ to 23¾ feet, with 7 feet depth of water on sills; breadth of canal, at bottom, 36 feet, at top, 60. In 1840, the total cost was estimated at \$404,000. The total cost of the works, from their commencement to the 30th June, 1867, including improvements, was \$634,711.76.	1843.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Fleming, Peter.....	The original estimate was based on locks 100 by 20 feet, with 5 feet of water on sills of locks.	
Folsom, C. W.....	Engineer in charge of construction, St. Peter's Canal, Cape Breton, N.S.....	1854.
Forbes, W. B.....	Deputy Commissary General. Superintendent St. Lawrence Canals	1830.
Ford, Lieut.-Col.....	Royal Engineer. Succeeded Col. Thompson, R.E., as Superintending Engineer of the Rideau Canal, under Imperial Government.	
Forsyth, Robert	Superintending Engineer, Montreal Harbour and Ship Channel Improvement, River St. Lawrence, Montreal to Quebec.....	1855 to 1864.
Foulis, Robert.....	Report on River St. John, from Fredericton to Grand Falls, New Brunswick	21st Aug., 1826.
French, J. Barnard.....	Welland Canal Staff, north division, 2nd enlargement.....	1876.
Frome, Lt. E. G., R.E..	Description of Rideau Canal and Chaudière bridge.....	28th Feb., 1837.
Gallwey, W. B.....	Preliminary surveys, maps, profiles of projected Chats Canal, between Lake Chaudière and Lake des Chats, River Ottawa, 33 miles above the City of Ottawa..... <i>See Report of John Page, Chief Engineer of Public Works, dated Quebec, 30th March, 1854.</i> Work commenced by A. P. McDonald and F. Schram, contractors..... Unfinished since work was suspended	1852 to 1854. Aug., 1854. 15th Nov., 1856.
	Canal 2·83 miles long, designed with 6 locks, of 190 by 45 feet each, with 7 feet of water on the sills and a total lockage of 49·80 feet. Total expenditure, chiefly on rock excavation and preparing stone for locks, \$482,950·81, up to... <i>See page 841, App. 30, by G. F. B., Public Works Report, 1867-82.</i>	1st July, 1867.
Gamble, F. C.....	Assistant Engineer, Public Works, British Columbia..... do in charge of Public Works, British Columbia..... Member Canadian Society of Civil Engineers..... Resident Engineer and Agent, Public Works Department, British Columbia.....	1st May, 1881-86. 1st Jan., 1886-88. 20th Jan., 1887. 1st Jan., 1888-89.
Gamble, S.....	Report on projected Caughnawaga Canal, between River St. Lawrence and Lake Champlain.....	1855-56.
Garon, L.....	Assistant Engineer, Public Works, harbour surveys, Ontario	1880-81.
Gaudet, J. F.....	Engineering Staff on survey, Dawson Route, from Thunder Bay, Lake Superior, to Fort Garry, Manitoba, 451 miles	1857-59.
Gauvreau, Pierre.....	Engineering and Architect Staff, Province of Quebec, Public Works Department..... Subsequently employed by Provincial Government of Quebec until his decease, on the 16th May, 1884, at the age of 71.	1850-67.
Geddes, —.....	Consulting Engineer with Capt. Cole, R.E., and Fleming, Williamsburgh and Cornwall Canals.....	1834.
Gisborne, F. N.....	Mechanical Engineer and Electrician, &c. Fellow Royal Society, Canada	1882.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Gisborne, F. N.	Superintendent Government Telegraphs, Nova Scotia..... Laid Prince Edward Island Cable Superintendent Government Telegraph and Signal Service, Canada Laid Gulf of St. Lawrence and Bay of Fundy Cables..... Laid British Columbia Cables Member of Council Canadian Society of Civil Engineers....	1848-51. 1852. 1st May, 1879-90. 1880. 1881-84. 1888-89.
Gisborne, Hartley	Government Telegraph Constructing Engineer, British Columbia, &c..... District Superintendent Government Telegraphs, North-West Territories..... Associate member Canadian Society of Civil Engineers.... Located at Fort Qu'Appelle Telegraph Station.....	1880-82. 1st Oct., 1882-89. 9th June, 1887. 1889.
Gouin, W. F.	Engineering Staff, Public Works, Ontario, Manitoba and North-West Territories.....	1884-89.
Gourlay, Robert.....	His views respecting Cornwall and Welland proposed canals, and improvement of the River St. Lawrence... "Statistical Account of Canada," with map, published in London, England.....	1819. 1822.
Gray, Henry A.	Assistant Engineer, Intercolonial Railway..... do Public Works Department..... Examination and report, Neebish Rapids channel, Lake Huron..... Engineer in charge of harbours, Western Ontario..... Examination and report, Rideau River flood and proposed outlet by canal..... Member Canadian Society of Civil Engineers..... Assistant Chief Engineer, Public Works, at Ottawa..... Examination and report on saw-dust obstructions, River Ottawa..... Resident Superintending Engineer, Public Works, Maritime Provinces..... Engineer in charge of harbours, Western Ontario.....	1867-74, 1878-80. 1880. 1881 to 1886. 1886. 20th Jan., 1887. 1886 to 1888. 11th May, 1888. Aug., 1888-89. 1st July, 1889.
Greene, D.M.—U.S.	Report on saw-dust in navigable streams.....	10th March, 1871.
Greenwood, H.	Engineering Staff, New Canal Works, River Trent.....	1883 to 1887.
Grondin, A. L.	Engineering Staff, Public Works, harbour surveys, north shore of River St. Lawrence.....	1883.
Guay, J. F.	Mechanical Engineer, Altoona Shops, Pennsylvania Railway, U.S..... Assistant Engineer, North Shore Railway, Quebec to Montreal..... Engineer in charge of location and construction of Quebec and Lake St. John Railway..... Survey of projected railway from St. Alphonse, Baie des Ha! Ha!, River Saguenay, to Lake St. John..... Survey and plans for water works at Fraserville, R. du Loup..... Survey and plans for water works at Chicoutimi, River Saguenay..... Associate Member Canadian Society of Civil Engineers.... Engineer in charge of construction, Montmorency and Charlevoix Railway, Quebec to Ste. Anne de Beaupré..... Engineer in charge of surveys for projected works, Lake St. John, &c.....	1873 to 1878. 1878-79. 1880-87. 1882. 1885. 1887. 25th June, 1887. 1887 to July, 1889. 1889.
Guerin, Thomas.....	Engineering Staff, Head-quarters, Public Works..... Previously Professor Civil Engineering at McGill University, Montreal. Assistant Engineer of G. F. Baillairgé on Baie Verte Canal survey.....	1st Sept., 1864-69. 1870 to 1873.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Guerin, Thomas.....	Hydraulic surveys, Montreal, Ottawa, Chaudière Falls and Manitoba, &c..... Member Canadian Society of Civil Engineers..... Died suddenly in his office at Ottawa, 7th May, 1887.	1873-87. 20th Jan., 1887.
Gzowski, Col. C. S.....	Graduate of Engineering Military School of Kozemiensk, Russia. Engineer on the Pennsylvanian Canals, Lake Erie division, and on the construction of a portion of the New York and Erie Railway, terminating at Dunkirk, Lake Erie, U.S..... Superintending Engineer, roads, harbours, &c., Western Ontario..... Chief Engineer, St. Lawrence and Atlantic Railway..... Consulting Engineer do do do do harbour and works, at Montreal..... do ship channel improvement between Montreal and Quebec..... Canal Commission, projected enlargement, &c..... International Bridge across the Niagara..... Report on proposed enlargement Welland Canal..... do scheme Baie Verte Canal..... Third President Canadian Society of Civil Engineers.....	1837 to 1841. 1841 to 1847. 1848 to 1852. do do 1850 to 1853. 1850 to 1853. 16th Nov., '70 to '71 1871 to 1872. 14th Feb., 1873. 18th do 1873. 1889.
Hale, W. D.....	Specification for extension of piers at Port Stanley, Lake Erie.....	2nd Nov., 1849.
Hall, Francis Benj.....	Welland Canal route, with Messrs. Clowes and Roberts... Shubenacadie Canal, commenced 1827. Completed 1862... See App. 30, p. 902, by G. F. B., Public Works Report, 1867-82. Superintendent construction, Burlington Bay Canal..... Report on Baie Verte Canal project..... Report on proposed St. Peter's Canal, Cape Breton, N.S. Roads, Ontario. Welland Canal commenced 30th November, 1824. Opened 30th November, 1829, for vessels drawing 7½ feet of water, and of 21½ feet beam. Wooden locks, 110 by 22.	1824. 1825. 1825 to 1832. 1825. 1826. July, 1845.
Hamel, Amédée.....	Engineering Staff, Culbute Canal..... Assistant Engineer, Canadian Pacific Railway survey..... do River St. Louis improvement..... Head-quarters, Railways and Canals.....	1874. 1879. 1880. 1880-90.
Hamel, Félix M.....	Engineering Staff, Public Works, harbours, &c..... do Intercolonial Railway, until..... do Public Works, at Head-quarters, until..... do Canadian Pacific Railway do .. do Culbute Canal, River Ottawa do .. Eng. in charge. Lock, &c., R. aux Lièvres and Iron Bridge Chaudière Falls..... Member Canadian Society of Civil Engineers.....	1st March, 1867, to 1st Sept., 1868. 1st Sept., 1870. 10th June, 1871. January, 1874. August, 1874. 1887-90. 20th Jan., 1887.
Hanlon, —.....	This Engineer and W. R. Hopkins, "Persons possessing much professional talent," were consulted by Chamby Canal Commissioners respecting the estimate of Peter Fleming, £54,167 6s., which they increased to £60,300, for the construction of this canal, with locks of 100 by 20 feet, with 5 feet water on sills..... Canal commenced..... Canal opened to navigation with locks 118 to 125 × 23½ feet with 7 feet water on the sills.....	1830-31. Oct., 1831. 17th Nov., 1843.
Harrington, Thos. W....	Engineering Staff, St. Lawrence and Ottawa Canals .. Assistant Engineer, Lachine, Chamby, Culbute Canals...	19th July, 1870. 1st October, 1870.

ENGINEERS employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Harrington, Thos. W.	Assistant Superintending Engineer, Canals, Province of Quebec Member Canadian Society of Civil Engineers Died 26th October, 1887.	1st May, 1875-87. 20th Jan., 1887.
Harris, Major —, R.E.	Rideau Canal, Report and Estimate jointly made with Col. J. C. Smith and Sir George Hoste. Locks to be 108 × 20 × 5 feet water on sills (Afterwards built 133 × 33 × 5 on sills.) Work commenced in 1826, and completed 29th May, 1832, under Lieut. Col. By, R.E.	1825.
Harvey, —, R. E.	The last of the Superintending Engineers of the Rideau Canal, under the Imperial Government, until the canal was transferred to the Department of Public Works of Canada by Order in Council <i>See</i> "Lieut.-Col. By" for his predecessors.	3rd March, 1857.
Hawkins, William	Survey with David Taylor and David Thompson, of canal route Lake Huron to Ottawa River <i>See</i> Baddeley, Cartwright, Clarke, Walter Shanly, James Stewart, David Taylor, David Thompson, and App. 30, p. 837 to 847, by G. F. B., in General Report Public Works, 1867-82.	1837.
Haycock, Sam. H.	Engineering Staff, Galops Canal enlargement	August, 1879.
Hayne, Capt. R.	Royal Staff Corps. Superintendent, construction of Ottawa Canals	1833-34.
Hazlewood, Samuel	District Engineer on Canadian Pacific Railway. In charge of Fort Frances Canal works, at foot of Rainy Lake <i>See</i> Baillairgé, Mortimer, Sutherland, H. Thompson.	1875.
Heckman, J. W.	Engineering Staff, Public Works, river improvements Member Canadian Society of Civil Engineers	1886. 24th Feb., 1887.
Hegan, J. B.	Assistant Engineer, Intercolonial Railway Assistant Engineer, Public Works, Maritime Provinces Acting Engineer in charge of Public Works do Member Canadian Society of Civil Engineers Resident Engineer at St. John, Public Works, N.B.	1869 to 1873. 1873 to 1880. 1882 to Sept. 1883. Sept., '83 to July, '88. 17th May, 1888. July, 1889.
Henry, George W.	Lachine Canal enlargement, Lachine Division Left service July, 1885. for C.P.R.	July, 1880-85.
Henshaw, George H.	Resident Engineer, new lock and channel Ste. Anne de Bellevue, River Ottawa, north side Paper on floods of River St. Lawrence Paper on frazil ice, its nature and prevention, to the Canadian Society of Civil Engineers Member Canadian Society of Civil Engineers	October, 1873-83. 1884. 1887. 22nd March, 1888.
Heyland, A. R.	Engineering Staff, Public Works, British Columbia	1st October, 1885, to 19th Nov., 1888.
Hill, A. E. B.	Engineering Staff, Public Works, British Columbia Bachelor of Applied Sciences, member Canadian Society of Civil Engineers	1st Oct., 1887-89. 25th June, 1887.
Hopkins, W. R.	Resident Engineer, Chambly Canal Chambly Canal commenced Locks 118 to 125 × 23½, with 7 feet of water on sills. Chamby Canal opened to navigation St. Ours Lock and Dam proposed	1831-34. Oct., 1831. 17th Nov., 1843. 1835.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Hoste, Lieut.-Col. Sir Geo., R.E.	Rideau Canal, report and estimates. Locks to be 108×20 and 5 feet depth on sills. (Altered to $133 \times 33 \times 5$)... Work commenced 1826, and completed 29th May, 1832, under Lieut. Col. By, R.E.	1825.
Hounslow, T.; F. W., R.E.D.	Description of method of raising buildings by screws in Canada and the United States.	18th Sept., 1841.
Irving, J. L.	Assistant Engineer to H. A. Gray, Western Ontario.	26th May, 1884-88.
James, C.	On southern division, Welland Canal, 2nd enlargement.	1875.
Jervis, J. B.	Report on projected Caughnawaga Canal from River St. Lawrence to Lake Champlain, or from Caughnawaga to St. John, recommending its construction, as proposed by J. B. Mills, 19th February 1848.	13th Feb., 1855.
Jebb, Capt., R.E.	Routes for Rideau Canal proposed betw'n Ottawa & Kingston	1815 to 1817.
Joslin, H. K.	Lachine Canal, 2nd enlargement, Res. Eng., Montreal Div. Left service 1st May, 1882. Died in Nov., 1887.	July, 1872-82.
Keating, W. A.	City Engineer, Halifax, N.S. Superintending Engineer, Halifax Graving Dock. Constructed by Halifax Dry Dock Company, incorporated in England. Agreement with Public Works Depart., Canada, signed... Length, 585 feet; width, at coping level, 102 feet; width on bottom, 72 feet; width of entrance, 95 $\frac{1}{4}$ feet; depth on sill, ordinary spring tides, 30 feet— (spring tides rise 6 feet; neap tides, 3 feet). Work commenced after signing agreement. Opened for use, H.M.S. "Canada" docked. Subsidy by Dominion Government \$10,000 per annum for 20 years. Subsidy by Imperial Government and City of Halifax \$20,000 per annum. Contractor, Samuel Brookfield. Cost, about \$1,000,000. Approved by H. F. Perley, Chief Engineer, Public Works Departments.	1886-89. 13th Feb., 1886. 13th Feb., 1886. 20th Feb., 1889.
Keefer, George.	Res. Eng., first construction of lower div. of Cornwall Canal Resident Engineer in charge of Chambly Canal, completion and improvements. Member of Council, Canadian Society of Civil Engineers.	1834-43. 1844-47. 1889.
Keefer, Samuel H.	Secretary and Asst. Engineer, Public Works, Upper Canada Chief Engineer, Public Works, Ontario and Quebec. Survey Saut-Ste-Marie projected canal, Canada. Chief Superintending Engineer, Grand Trunk Railway. Inspector of railways. Assistant Commissioner of Public Works. Canal Commission. Report on proposed Welland Canal enlargement. do do Baie Verte Canal route, &c. Second Past-President Canadian Society of Civil Engineers Born at Thorold, 22nd Jan., 1811. Died at Brockville, 7th Jan., 1890.	1833-41. 17th Aug., 1841-52. 1852. 1853 to 1859. 1857-64. 6th May, 1859-64. 16th Nov., 1870-71. 14th Feb., 1873. 18th Feb., 1873. 1888.
Keefer, Thos. C.	Assistant Engineer, Welland Canal. River Ottawa slides and booms. River St. Lawrence improvements. Survey and design for Victoria Bridge. Consulting Engineer, Ship Channel and Montreal Harbour Hamilton Water Works.	1842-45. 1846 to 1849. 1849 to 1851. 1851-52. 1853 to 1855. 1857-59.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Keefer, Thos. C.	Georgian Bay Canal project, report Chief Executive Committee of Canada at Paris Exhibition. Montreal Water Works, &c. First Past-President Canadian Society of Civil Engineers. President American Society of Civil Engineers. Montreal Flood Commission	1863. 1878. 1878 to 1887. 24th June, 1887. 1888. 1886-88.
Keeley, D. H.	Assistant Superintendent Government Telegraph Lines of Canada Associate Member of Canadian Society of Civil Engineers.	1st March, 1882-90. 25th June, 1887.
Keller, Capt. L.	Engineering Staff, Public Works, hydrographic survey, Pte aux Trembles to Cap Charles, River St. Lawrence, &c.	1882-84.
Kelly, Athol D.	Engineering Staff, Welland Canal enlargement, North Division	1875.
Kennedy, John.	Chief Engineer, harbour improvements, Montreal, and dredging of River St. Lawrence, Montreal to Quebec. Vice-President Canadian Society of Civil Engineers. Montreal Flood Commission	20th April, 1875-89. 24th June, 1887. 1886-88. 1888-89.
Kierkowski.	Engineering Staff, Beauharnois Canal Died towards 1871.	1842 to 1845.
Killaly, John S.	Educated in Europe for the civil and mining branches of the profession; chose the North American States as a field of operation. He was subsequently engaged in Canada, upon the construction of the Cornwall Canal, which was commenced in 1834 and completed in 1843. Enlargement with locks, 270 × 45 × 14 feet water on lock sills; commenced 1876, unfinished 1889. Superintending Engineer of the Rideau Canal He was the first Superintending Engineer appointed on this work by the Government of Canada; all previous engineers thereon having been appointed by the Imperial Government. (<i>See</i> Lieut.-Col. By, R.E.). Returned to the United States where he has been engaged on various works, chiefly, of late years, upon the canals of the State of New York. Resides at Booneville, Oneida County, N.Y. Brother of Hon. H. H. Killaly, chairman of the Board of Works, Canada, 29th Dec., 184 8th June, 1846.	Jan., 57 to April, 58 1832 to 1857. 1858-89. Dec., 1889.
Killaly, Hon. H. H.	Entered Trinity College, Dublin, ; graduated there in 1819, when he commenced the practice of civil engineering, superintending the construction of the Custom House at that city. Was afterwards associated with his father until the death of the latter in 1832, and was engaged in the construction of roads, bridges, canals, and the improvement of the River Shannon, &c., most of which works being situated in the western part of Ireland. His father was for many years Government Engineer for the Board of Work of Ireland, under Gen. Sir Geo. Burgoyne, R.E. Resigned his position in Ireland and came to Canada where he settled near New London, Ont. Survey with N. H. Baird for 1st enlargement of Welland Canal. Chairman Board of Works, Ontario and Quebec Specification of works at Winds Harbour, Lake Ontario. Assistant Commissioner of Public Works.	1834. 1837. 29th Dec., 1841 8th June, 1846 1st May, 1843. 15th Feb., 1851

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Killaly, Hon. H. H....	Special reports on Saut-Ste-Marie, Goderich Harbour, piers below Quebec, Lake St. Peter, Pointe Pelée lighthouse, &c. Died 28th March, 1874, aged 72.	1846 to 1862.
Killaly, H. H. jun.....	Resident Engineer, upper division of Lachine Canal, 2nd enlargement..... Cornwall Canal enlargement, upper half..... Rapide Plat Canal, &c., enlargement, &c..... Member Canadian Society of Civil Engineers.....	Feb., 1876-85. 1st July, 1885-88. Dec., 1884-88. 20th Jan., 1887.
King, Chetwood Henry Waters.....	Engineering Staff, southern division, Welland Canal enlargement.....	Feb., '83 to Nov., '88.
King, William.....	Assistant Mechanical Engineer, Ottawa, &c..... Public buildings and dredges.	26th Dec., 1878-89.
King, Capt. William....	Royal Staff Corps. Grenville Canal..... Superintending Engineer, Cascades, Split Rock, Côteau du Lac—Ordnance Canals..... <i>See By, Mann, &c.</i>	1825. 1826.
Kingsford, William.....	Engineering Staff, Lachine Canal Survey..... On particular service until..... Engineer in charge of harbour works, Ontario..... Transferred to Department of Railways and Canals..... Member Canadian Society of Civil Engineers.....	1847. June, 1873. June, 1873 to 1880. 1880. 20th Jan., 1887.
Kinipple & Morris	Engineers, Mechanics Institute of Civil Engineers, England Engineers—Docks at entrance of River St. Charles, Quebec. Works authorized by Act 36 Vic., chap. 32, sec. 17. Princess Louise embankment and quay wall on north side of 1st projected series of docks, 3,960 feet long and 330 wide. Outer or tidal basin, 20 acres in area, and 25 feet deep at low water of ordinary spring tides, for a length of 1,250 feet. Inner basin, 36 acres in area, and 25 feet deep at highwater lowest neap tides, for a length of 2,160 feet—Dredging, &c., unfinished..... Spring tides rise 18 and neaps 13 feet. Work commenced under Harbour Commissioners, Quebec..... Quay wall and outer basin, nearly completed..... Cross-wall between inner and outer basins, commenced in 1883, under H. F. Perley, Chief Engineer, Public Works, and completed excepting caisson..... Contractors—Dredging, walls, &c., Simon Peters, Augustus B. Wright, Edward Moore..... Contractors—Dredging, cross-wall, &c., Larkin, Connolly & Co..... Contractor—Valves of sluices, &c., F. X. Drolet.. Expenditure on construction, \$3,821,900.....	1875-82. 1873. 1889. 28th May, 1877. Dec., 1882. 1889. 2nd May, 1877 to '81. Sept. 1883-89..... 1887. 10th Dec., 1889.
	Engineers—Lévis Graving Dock, opposite Quebec..... Length, 495 feet, with a circular head of 31 feet radius, and a square offset of 19 feet on each side. Width at coping level 100, and at bottom 73 feet. Entrance width, 62 feet. Depth of water on sill at high water of ordinary spring tides, 25½ feet. Depth of water on sill at high water of ordinary neap tides, 20½ feet. Work authorized by Act 38 Vic., chap. 56.....	1875-82. 1875.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Kinipple & Morris	<p>Site chosen by an Order in Council May, 1877.</p> <p>Work commenced under Harbour Commissioners, Quebec 1878.</p> <p>Work continued and completed, under H. F. Perley, Chief Engineer, Public Works Sept., 1883-89.</p> <p>Contractors—Masonry, &c., Larkin, Connolly & Co 17th Aug., 1878-83.</p> <p>do do do do Sept. 1883-89.</p> <p>do Boilers and pumping machinery, Carrier, Lainé & Co 30th March, 1880.</p> <p>do Caisson, &c., Wigham, Richardson & Co.</p> <p>Expenditure on construction, \$910,000 up to 10th Dec., 1889.</p> <p>Engineers—Esquimalt Graving Dock, about 3 miles below Victoria, Vancouver Island, B. C. Plans and specifications prepared and on exhibition at Victoria, &c., by Provincial Government of British Columbia 18th Nov., 1879.</p> <p>Plans of the caisson furnished by them 1st Dec., 1882.</p> <p>Act of Provincial Government, B. C., authorizing construction of graving dock, 43 Vic., chap. 8 1880.</p> <p>Agreement between Dominion Government and Government of British Columbia, under sanction of Imperial Government, respecting construction of graving dock, signed subsequently to Contract awarded to McNamee & Nish by Government of British Columbia 12th July, 1880.</p> <p>This contract was cancelled by Government of British Columbia 1880.</p> <p>Work continued by day's labour 1882.</p> <p>Hon. J. W. Trutch appointed Engineer in charge and W. Bennett, as Resident Engineer 1882-83.</p> <p>Work under Dominion Government authorized by Act 47 Vic., chap. 6 24th Nov., 1883.</p> <p>The graving dock and its grounds to be transferred to Dominion Government in virtue of this Act 1884.</p> <p>Work continued and completed under H. F. Perley, Chief Engineer, Public Works 1884-87.</p> <p>Contract for completion of graving dock signed by Larkin, Murphy & Connolly, \$581,841.43 8th Nov., 1884.</p> <p>Contract for caisson, "Dominion Bridge Co.," Montreal, \$53,729.54, to 10th July, 1885.</p> <p>Dock completed and opened by entrance of H. M. S. "Cormorant" July, 1887.</p> <p>Expenditure—Provincial Government, British Columbia \$384,512 66</p> <p>do Imperial Government 243,333 33</p> <p>do Dominion do 529,214 42</p> <p>Total \$1,157,060 41 up to 17th Dec., 1889.</p> <p>Dimensions of graving dock as completed up to 1890.</p> <p>Length at centre 430 feet</p> <p>Width at bottom 41 "</p> <p>do coping level 90 "</p> <p>do entrance 65 "</p> <p>Depth of water on sill, 26½ feet at high water springs.</p> <p>Springs rise 7 to 10 feet, per Capt. Richards.</p> <p>Neaps rise 5 to 8 " "</p> <p>N.B.—The last expenditure on this dock was for 75 steel keel blocks, \$7,150, as per agreement with Wilson Bros., Victoria, B. C. 19th Aug., 1889.</p> <p>The latter sum is comprised in the total amount expended as above.</p>	
Lafleur, Eugène D	<p>Engineering Staff, Public Works at Ottawa 27th Sept., 1881.</p> <p>Assistant Engineer, hydrographic survey, River St. Lawrence July, 1883-84.</p> <p>Harbour works, Ontario, Quebec and New Brunswick 1884-89.</p> <p>Member Canadian Society of Civil Engineers 20th Jan., 1887.</p>	

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Langevin, H. Laforce....	Princess Louise Basins, Quebec, and Pointe Lévis Graving Dock.....	1884-88.
	Assistant Engineer, harbour works, Quebec.....	1889.
	Associate member Canadian Society of Civil Engineers....	27th June, 1888.
Languedoc, G. de G.....	Grenville Canal enlargement.....	May, 1879 to 1887.
	Associate member Canadian Society of Civil Engineers....	24th Feb., 1887.
Lantier, E.....	Engineering Staff, survey proposed Cedars Canal.....	1872-73.
Larue, Adolphe.....	Survey of Lake St. Louis.....	1836.
Laurie, James.....	Report and estimates, St. Peter's Canal, Cape Breton, N.S.....	July, 1858.
Lefebvre, Jean.....	Engineering Staff, Metapedia Road, S. Division, assistant of G. F. Baillairgé.....	1857 to 1867.
Legge, Charles.....	Engineering Staff at Head-quarters, Montreal, and on weirs, &c., of canals below Prescott.....	1846 to 1854.
	Afterwards on railway service, &c. Died —	
Lepage, J. B.....	Engineering Staff, Public Works, harbour surveys and river improvements.....	1880-88.
	Previously in charge of Colonization roads since 1857.	
Lepage, Samuel.....	Engineering Staff, Public Works, harbour surveys below Quebec.....	1883.
Leprohon, C. de B.....	Engineering Staff, Lachine Canal enlargement, Lachine Division.....	Oct., 1875-85.
	Left service July, 1885, for Corporation, Montreal.	
Leslie, William Lewis...	Engineering Staff, S. Division, Welland Canal enlargement	Oct., 1872.
	Transferred to Head-quarters, Ottawa.....	Feb., 1889.
Lewis, Col., R.E.....	Commissioner, Rideau Canal.....	Spring, 1828.
Light, Alex. L.....	Assistant Engineer on western roads, Ontario, under Col. C. S. Gzowski.....	1842 to 1848.
Lightfoot, F. C.....	Engineering Staff, surveys of harbours and rivers.....	July, 1874-77.
	Employed in Chief Engineer's Office.....	1877-90.
Lindsay, John.....	Engineer.—Survey head-waters, River Ottawa.....	15th June, 1880.
	Died 28th Sept., 1880, at Mattawa.	
Long, Major Andrews...	Royal Staff Corps of Engineers, Imperial Government.	
	Construction and repairs, Cascades, Split Rock and Côteau du Lac—military canals.....	1817.
	<i>See</i> By, Mann, &c.	
Lyons, James.....	Superintending Engineer, River Trent Works—improvements; light-houses, River St. Lawrence, &c.....	1843-55.
Macdonald, J. Frobisher	Cornwall Canal, &c.....	1842-43.
	Superintending Engineers, canals, Lachine, Chambly, St. Ours, &c.....	1848-52.
	Piers below Quebec.....	1849-50.
	River St. Maurice, slides and booms.....	1851-52.
	Temiscouata Road, commenced 1856, opened 1861, completed 1866.....	1853.
	Died at Toronto in the autumn of 1857.	
Macdougall, Alan.....	Engineering Staff, Public Works, harbours, &c., Ontario..	Sept., 1873.
	Member Canadian Society of Civil Engineers.....	20th Jan., 1887.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Maillefert	Submarine Engineer, examined River St. Lawrence Rapids from Lake Ontario to foot of Lake St. Louis at Lachine	1854.
Maine, Charles	Engineering Staff, harbour of Three Rivers, River St. Maurice slides, dams and booms, River Yamaska, Nicolet, &c. Previously on Public Works in France, &c.	1886-89.
Mann, Col. Cother	<p>Royal Engineer Corps, Imperial Government.</p> <p>Letter to Messrs. Forsyth, Richardson & Co., opponents to McTavish, Frobisher & Co., respecting Saut Ste. Marie Canal, prior to.....</p> <p>Saut-Ste-Marie Canal, on Canadian territory, 3,000 feet long, with a lock, raising the water 9 feet, between Lakes Huron and Superior; survey made by order of the firm of Messrs. McTavish, Frobisher & Co., on behalf of the North-West Company.....</p> <p>Canal constructed by them, prior to.....</p> <p><i>See</i> Capt. Bruyères, Royal Engineer.</p> <p>Report on the state of the first canals built between 1779 and 1783, at the Cascades and Mill Rapid, Split Rock, "Trou du Moulin" at Longueuil's Mill and at Côteau du Lac, recommending their enlargement.....</p> <p>He recommended to enlarge the original locks, which were 7 feet wide at Côteau du Lac, and 6 feet at Split Rock, to 9½ feet, between the gates, to increase the depth of water 1½ feet in the canals and on the lock sills, then about 2 feet, to 3½ feet, to widen the lock chambers 4 feet and the canals 2 feet.</p> <p>At Mill Rapid and Cascades, at Cascades Point, herecommended the construction of one instead of two canals, and to sink the bottom at each entrance thereof to a depth of 3 feet below the lowest water for the passage of the largest boats. Canal to be 10 feet wide, with 3 locks 20 feet wide in the chamber and 120 feet long, so as to allow the passage of 6 boats at a time.</p> <p>Frederick Haldimand, Lieut. Governor of Canada, 1778-1785, wrote to Lord Geo. Germain that a very complete canal was completed and in operation at Côteau du Lac. <i>See</i> letter in Canadian Archives, at Ottawa, D. Brymner, Archivist, dated.....</p> <p>The locks at "Split Rock" and "Côteau du Lac" were partly rebuilt, and a new canal, about half a mile in length, with 3 locks and a total rise of 13¾ feet was built at the Cascades.....</p> <p>All the locks were probably then enlarged to 9½ feet between the gates, as suggested by him.</p> <p>The locks of the Cascades, Split Rock and Côteau du Lac canals were enlarged by the Royal Staff Corps, to 12 feet between the gates, and the depth of water on the lock sills was increased to 3½ feet, for the passage of Durham boats with from 80 to 100 barrels of flour, instead of the former boats with 30 to 40 barrels</p> <p>From 1815 to 1834, both years inclusive, the gross revenue on these canals was £31,580 13 4; the cost of repairs, &c., £10,102 15 2¾, and the net revenue £21,470 17 1¼.....</p> <p>Report on navigation of St. Lawrence at Longueuil Mill "Trou du Moulin," and between that point and Cedars.</p> <p>In charge of construction of Grenville Canal commenced in summer of.....</p> <p>G. F. Baillairgé, the present Deputy Minister of Public Works, made surveys and plans of the canals at the Cascades, Split Rock and Côteau</p>	18th April, 1803.
		1797. April, 1802.
		24th Dec., 1880.
		25th Oct., 1780.
		1804.
		1817
		1815 to 1834.
		25th Sept., 1818.
		1819.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Mann, Col. Cother.....	du Lac, the locks and gates of which were then entire; the width between the gates of the locks was 12 feet, and the depth of water on the sills from 3 to 4 feet. He also measured one of the canals built between 1779 and 1783, on Cascades Point, which had been used as a flume for a mill then in ruins; the width between the lock gates was 6 feet... From 1857 to 1890, the masonry of the locks, &c., at the Cascades and Split Rock, has been partly demolished by persons in want of cut stone for building purposes. At Côteau du Lac, the old canal has been used most of the time up to 1881 as a flume for a mill erected thereon by George Beaudet, the lessee For further details, <i>see</i> General Report of Public Works, 1867; also, Report on Canadian Archives, 1886, by Douglas Brymner, Archivist. These canals were not constructed by the French, as was believed in 1867.	1857. 1st June, 1871, to 1st Feb., 1881.
Mann, Capt. J. W.....	Royal Staff Corps of Engineers. Report on navigation of St. Lawrence ... Superintending Engineer, construction of Grenville Canal.	25th Sept., 1818. 1819.
Marceau, Ernest.....	Lachine Canal enlargement..... Grenville Canal and Ste. Anne Lock enlargement..... Assistant Engineer, Ottawa River canals, &c..... Member Canadian Society of Civil Engineers.....	July, 1876. Aug. 1877-81. Nov. 1881-89. 12th May, 1887.
McAlpine, Hon. W. J., United States.....	Report on saw-dust in Ottawa River, &c..... Report on proposed Welland Canal enlargement.....	1st March, 1871. 14th Feb., 1873.
McCarthy, Charles.....	Engineering Staff, Public Works, at Head-quarters, &c.... Superannuated 1st July, 1884.	1857-84.
McCarthy, C. J.....	Engineering Staff, Public Works, roads, canals, &c.....	Sept., 1872.
McCarthy, James M.....	Engineering Staff, Public Works, under Thos. Guerin.... Bachelor of Applied Sciences. Student Canadian Society of Civil Engineer.....	1883-84. 20th Jan., 1887.
McCarthy, William.....	Engineering Staff, Public Works, river works, &c..... Previously employed on railways. Member Canadian Society of Civil Engineers.....	1884-86. 22nd March, 1888.
McCordock, W. J.....	Engineering Staff, Superintendent of dredging, Maritime Provinces.....	1870-89.
McGreevy, Charles.....	Engineering Staff, Public Works, harbour surveys..... Assistant Engineer, Quebec Harbour works..... Associate member Canadian Society of Civil Engineers....	1881-83. 1883-89. 9th Feb., 1888.
McGreevy, Robert.....	Engineering Staff, Public Works, harbour surveys.....	1881-86.
McKay, E. B.....	Assistant Engineer on Cowichan River, British Columbia.	1st Sept., 1887, to 2nd Feb., 1888.
McLaughlin, Geo. E....	Assistant Engineer, Public Works, Maritime Provinces... Engineer in charge Public Works, Maritime Provinces... Died 6th October, 1883.	1872-81. 1881 to 1883.
McNab, Alexander.. ...	Engineer in charge, construction of St. Peter's Canal for Government of Nova Scotia..... Transferred to Department Public Works..... Appointed Engineer of Intercolonial Railway, in operation. Canal commenced by Nova Scotia Government, 1854. Canal completed by Dominion Government, 5th August, 1869.	July, 1865-67. July, 1867-72. Nov., 1872.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
McNaughton, Chas. E. . . .	Engineering Staff, Welland Canal enlargement, Northern Division Assistant Engineer to H. A. Gray, Western Ontario	1875. 1883.
McTaggart, J.—Eng . . .	Examination and report on Rideau Canal	1827-28.
Melhuish, Capt., R.E. . .	Account of demolition of Glacière Bastion, Quebec Consulting Engineer, Chambly Canal	1828. 1831.
Merrill, Horace	Superintending Engineer, Ottawa River slides and booms.. St. Maurice slides at Shawenegan and Grand Mère, first designed by him and laid out by G. F. Baillargé Carillon dam across the River Ottawa Died 22nd May, 1883.	20th Jan., 1849, to 22nd July, 1875. 1852. June, 1879, to 1883.
Merritt, Thomas	Engineering Staff, Welland Canal enlargement, Northern division	1875.
Michaud, C. E.	Assistant Engineer of G. F. Baillargé on survey of Gaspé and Ste. Anne des Monts road, north shore, Gulf of St. Lawrence Engineering Staff, Public Works, harbour works, &c. On Pacific Railway survey, British Columbia Resident Engineer, lock and dam, River Yamaska, Rivers St. Francis and Nicolet, dredging and improvement Resident Engineer, harbour works, south shore, River St. Lawrence	1861-62. 1st Nov., 1864-70. 1871 to 1873. 1877 to 1888. 1888-89.
Michaud, Cléophas	Engineering Staff, Public Works, harbour surveys do do do do do do	June, 1873. 1884-85, 1887-88.
Millett, Herbert Alfred..	Engineering Staff, Southern Division, Welland Canal enlargement	Aug., 1881.
Millidge, E. G.	Resident Engineer, St. Peter's Canal, Cape Breton, &c. Canal commenced by Nova Scotia Government in September, 1854, suspended 1856, resumed in 1866, and completed in 1869. Assistant Engineer, Public Works, Maritime Provinces Resident Engineer, Antigonish,--Public Works and surveys, Cape Breton, Guysborough, Antigonish and Pictou Counties, Nova Scotia Member Canadian Society of Civil Engineers	1875 to 1881. 1872 to 1888. July, 1889-90. 11th Nov., 1887.
Mills, J. B.	Engineer on the first construction and afterwards on enlargement of the Delaware, Hudson and Erie Canals. Projected Cedars Canal Cornwall and Williamsburgh Canals Projected Caughnawaga Canals Chief Engineer of the Genessee Valley Canal, afterwards on the Kanawba projection in Virginia, U.S., after his departure from Canada. Consulting Engineer and vice-president of the Pottsville and Danville road, in Pennsylvania. Consulting Engineer on the Adirondack Railway, State of New York. Afterwards retired to his home in Peekskill, on the Hudson, N.Y. Born in Chester, 27th March, 1800. Died at Peekskill, N.Y., 29th June, 1871.	1833. 1833-48. 1847-48.
Minnitte, R. C.	Baie Verte Canal, first survey for a canal of about 4 feet draught, to be fed by fresh water, through valley of Au Lac to the Missiguach Lakes and thence to River Tidnish	Oct., 1822.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Monro, Thomas.....	On Grand Trunk Railway, surveys and construction, Montreal to Kingston, and St. Lawrence Bridge survey, Montreal; also, Water Works survey and plan, Montreal.....	1850 to 1857.
	On Toronto and Georgian Bay, proposed canal, in charge of summit level survey.....	1857.
	Assistant Engineer, Hamilton Water Works; Resident Engineer, Hamilton and Port Dover Railway.....	1857 to 1859.
	Public Works, Ontario, &c., Harbours of Refuge; water supply to Public Buildings, Ottawa, &c.....	Feb., 1860-69.
	One of the Government Inspectors of Railways.....	1st May, 1863.
	Engineer of Water Works, Pit Hole City, Pennsylvania.....	1865.
	Assistant Engineer, preliminary location and construction, Intercolonial Railway.....	1868-70.
	Survey, Lake Shehandowan on the Dawson route.....	1869.
	Welland Canal enlargement, survey and location.....	1870-71.
	Engineer in charge of Welland Canal.....	July, 1872, to 31st Jan., 1873.
	Resident Engineer, Northern Division, Welland Canal enlargement.....	1873-88.
	Invited to International Congress of Navigation at Brussels.	30th April, 1885.
	Member of Mechanics Institute of Civil Engineers, England	
	Member Canadian Society of Civil Engineers.....	20th Jan., 1887.
	Aqueducts, Merritton, Simcoe and Niagara Falls.....	1888.
	Examination and report, projected enlargement of Beauharnois Canal, and on projected new canal, north shore, County of Soulanges.....	1889.
Mooney, William.....	Engineering Staff, Lachine Canal enlargement, Montreal Division.....	1873.
	Yamaska lock and m, &c., Assistant Engineer.....	1880-84.
	Died 2nd January, 1885.	
Morris.....	Engineer with Kinipple.	
	Princess Louise Docks, Quebec and Lévis Graving Dock..	1875-82.
	Esquimalt Graving Dock.....	1879-83.
	See Kinipple & Morris.	
Mortimer, Henry J.	Assistant of Samuel Hazlewood, District Engineer, Canadian Pacific Railway.	
	Profile and location, Lock—Fort Frances Canal, at foot of Rainy Lake, on the Dawson Route.....	1875.
	Plan of Lock, &c., afterwards modified by G. F. Baillairgé, Assistant Chief Engineer, Public Works.....	1876.
	See Baillairgé, Hazlewood, Sutherland, H. Thompson.	
Mothersill, G. A.....	Chief Engineer's Staff, Head-quarters, Ottawa.....	May, 1873-89.
Murdoch, William.....	Collingwood Breakwater, Lake Huron.....	
	Port Arthur, River Kaministiquia, &c., Ontario, harbour works, Resident Engineer, Public Works, Lake Superior.....	1871.
	Previously employed, chiefly on the Canadian Pacific, Pictou and Trenton, Manitoba and South-Western, North-West Central and Hudson Bay, Railways, as Resident, District or Chief Engineer.....	15th Oct., 1884-89.
	Member Canadian Society of Civil Engineers.....	1871 to 1884.
		20th Jan., 1887.
Nagle, Gerald J.....	First Superintendent, Ottawa River slides and booms.....	1843 to 1846.
	Specification, River Trent slides and booms.....	28th June, 1843.
Nelson, J. M.....	Floods at Montreal, Assistant Harbour Engineer.....	1884.
Nichols, Col., Commanding R. E.....	Rideau Canal route surveyed under his orders by Captain Jebb, R.E.....	1815.

ENGINEERS Employed on Public Works, Canada—Continued.

Engineers.	Works.	Dates of Employment, &c.
Nish, A. G.	Chief Engineer, harbour works of Montreal, and ship channel, River St. Lawrence, from Montreal to Quebec. Afterwards contractor on Government works at Esquimalt graving dock, British Columbia, &c., up to 1883. Died 31st January, 1888.	1864 to 1875. 24th Feb., 1880-83.
Norman, Thomas E.	Chats Canal, north side River Ottawa Report on survey of the islands and on the water power of the Chats Rapids, River Ottawa.	1853. 1st March, 1858.
Normand, J. B.	River St. Maurice, slides, booms, dams, piers. Appointed Commissioner to report on causes of floods between Quebec and Montreal. Report on causes of floods Acting Superintendent, River St. Maurice, slides and booms	1853-89. 4th Oct., 1873. 21st Feb., 1874. 1875-76.
Odlum, Ed. John.	Assistant Engineer, Welland Canal enlargement, Southern Division.	Nov., 1872-88.
Oldfield, Lieut.-Col. J., Commanding R.E.	Report on experiments, blowing in gates at Quebec.	11th, 13th July, 1840
Ostell, John.	Architect, Surveyor and Engineer.	1847-48.
Page, John, sen	Resident Engineer, Welland Canal. Assistant Chief Engineer, Welland Canal. Resident Engineer, Junction and Williamsburgh Canals. Superintending Engineer, canals below Kingston. Chief Engineer, Public Works, Provinces of Quebec and Ontario. Deputy Commissioner, Public Works, Quebec and Ontario. Chief Engineer, Public Works, Canada. Welland Canal enlargement, survey commenced. Reports on enlargement of canals, Lake Erie to Montreal. Report on proposed Baie Verte Canal. Special and general report on canals, River St. Lawrence. Chief Engineer of canals of Canada. Fourth President, Canadian Society of Civil Engineers, proposed for 1890.	1842. Sept., 1842. 1850-51. 1852-53. 5th Nov., 1853. 8th March, 1864. 15th March, 1864. 1870. 1872 to 1877. 10th Dec., 1873. 16th Feb., 1880. 1879-90. 1890.
Page, John, jun.	Lachine Canal enlargement, Engineering Staff. Assistant Engineer, Cornwall Canal Died 14th April, 1885.	April, 1876-79. 1880-85.
Papineau, L. G.	Engineering Staff, Public Works, at Montreal, &c do do Chambly Canal, &c. do River Richelieu survey, &c. Associate member Canadian Society of Civil Engineers.	1878-80. 1881-83. 1884-89. 24th Feb., 1887.
Painchaud, Antoine.	Resident Engineer, construction of roads between Gaspé Basin and the St. Lawrence. President of Corporation of Land Surveyors, P. Q.	1858-67. 1884-89.
Parent, E. H.	Seigniorial Cadastral Office. At headquarters and on surveys, &c. Resident Engineer, Grenville Canal. Superintending Engineer, Carillon, Grenville, Culbute canals Superintending Engineer, Lachine, Beauharnois, Chambly Canals, St. Ours Lock and Dam, &c. Member Canadian Society of Civil Engineers.	1856-59. 15th Sept., 1864-71. July, 1872-78. 4th Feb., 1879, to 1st May, 1880. 12th May, 1880-90. 20th Jan., 1887.
Pariseau, L. S.	Engineering Staff, Grenville Canal enlargement. do River Richelieu survey. Associate member Canadian Society of Civil Engineers.	1878 to July, 1884. 1885-88. 24th Feb., 1887.
Pearse, B. W.	Resident Engineer, Public Works, British Columbia.	July 1871 to 1881.
Perley, George E.	Engineering Staff, Ottawa. Assistant Engineer, Kingston graving dock.	2nd June, 1884-88. June, 1888-90.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Perley, H. F.	Engineer Staff, Government of New Brunswick	Feb., '48, to June, '52
	do do	Aug., '56, to Dec., '60
	do do Nova Scotia	May, '63, to Aug., '65
	Engineer in charge of Government Railways, New Brunswick	May, '70, to May, '72
	Engineer in charge, St. Peter's Canal, Cape Breton	31st Jan., 1880-89.
	Superintending Engineer, Public Works, Maritime Provinces, Federal Government	1st May, 1872.
	Chief Engineer, Public Works, Canada	25th Nov., 1880-90.
	Chief Engineer, harbour works, Quebec, graving dock, Lévis	Sept., 1883-90.
	Chief Engineer, ship channel, Montreal to Quebec	31st Dec., 1888-90.
	Vice President, Canadian Society of Civil Engineers	24th June, 1887-89.
	Montreal Flood Commission	1886-88.
Perry, Capt. Geo. H.	Chats Canal, Ottawa and French River surveys	1853-58.
	Resident Engineer, Culbute Canal, Upper Ottawa	Sept., 1873-87.
	Died 1888.	
Phillipotts, Lieut.-Col., R. E.	Engineer in charge of Cornwall Canal construction	1836.
	Reports on inland navigation of Canada	31st Dec., 1839, to 3rd Aug., 1840.
	Report on proposed enlargement of Welland Canal	1841.
Pilkington, Woodford	Resident Engineer, harbour works, Quebec, and graving dock, Lévis	1876 to 1883.
	Now employed in India	1889.
Piper, Capt., R.E.	Commissioner, harbour works, Montreal	1830-32.
Pound, Nicholas	Engineering Staff, Public Works, harbour surveys	1888.
Power, S.	Principal Engineer on Welland Canal	1842-45.
	Specification for construction of lock gates, Welland Canal	Oct., 1843.
Pritchard	Assistant Engineer, Welland Canal	1843-44.
Raaslof, Col. de, Russian Engineer	Submarine Engineer. Examined River St. Lawrence rapids from Lake Ontario down to foot of Lake St. Louis, at Lachine, with Maillefert	1854.
Randall, —	Report on Welland Canal, in progress	31st May, 1830.
Ranney, G. W.	Superintending Engineer, River Trent canals, slides, dams, and booms, from Trenton, Lake Ontario, up to Lake Scugog, inclusive	4th May, '55 to July, 1873.
	Member Canadian Society of Civil Engineers	20th Jan., 1887.
Read, Capt. J. M.	Royal Staff Corps of Engineers, Imperial Government. In charge of Grenville Canal construction	1824.
Rheame, L. N.	Engineering Staff, Lachine Canal, second enlargement	1st Nov., 1877-84.
	Rapide Plat Canal enlargement	Dec., 1884.
	Cornwall Canal do	1st July, 1885-89.
	Member Canadian Society of Civil Engineers	20th Jan., 1887.
Richard, J. F.	Harbour surveys, Province of Quebec	1881-89.
Rigney, James	Engineering Staff, roads, Eastern Townships, P.Q.	1842.
	Assistant Engineer, River Trent works at Bobcaygeon, &c. Died in California, 6th August, 1863. Interred at London, Ontario.	1843-49.
Ritchie, Thomas	Engineering Staff, Maritime Provinces	1888.
Roberts, U.S. Eng.	Examination of route for projected Welland Canal with Messrs. Hall and Clowes, British engineers	1824.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Roberts, U.S. Eng.	Canal commenced 30th Nov., 1824. do opened 30th Nov., 1829. Wooden locks 110 by 22 ; 7½ feet water on sills.	
Robertson, G. E.	Engineering Staff, Lachine Canal, second enlargement, Lower or Montreal Division, &c. Cornwall Canal enlargement, upper half. Member Canadian Society of Civil Engineers.	Aug., 1873-85. July, 1885-89. 20th Jan., 1887.
Robinson, Arthur G.	Assistant Engineer, Lachine and Chambly Canals.	1843-48.
Rogers, R. B.	Assistant Engineer, River Trent slides, booms and canals. do Midland Division, Grand Trunk Railway do Survey Trent Valley Canal. Superintending Engineer, River Trent slides, booms and locks. Bachelor of Applied Sciences and member Canadian Society of Civil Engineers.	1878 to 1881. 1881 to 1882. 1882 to 1883. 1st July, 1884-89. 12th May, 1888.
Rosa, Joseph.	Engineering Staff, roads, bridges, piers, harbours and river improvements, &c., Province of Quebec.	29th May, 1856-89.
Rosamond, Joseph A.	Report, River St. Francis, Pierreville Mills. Engineering Staff, Lachine Canal enlargement. Resident Engineer, Murray Canal, Lake Ontario. Member Canadian Society of Civil Engineers.	13th July, 1875. June 1876-82. June, 1882, to 1889. 24th Feb., 1887.
Ross, John LeBreton.	Engineering Staff, Public Works, Ontario and Quebec. Died, May, 1876.	December, 1856-76.
Rowan, James H.	Engineering Staff, Public Works, canals and railways. Subsequently District Engineer, Canadian Pacific Railway, Manitoba.	May, 1860-72. 1872 to 1882.
Roy, Charles F.	Harbours, Province of Quebec and Maritime Provinces. Ship channel between St. Roch and Ile-aux-Coudres. Was elected for the County of Kamouraska as Member of the House of Commons, 1877-78. Died, 13th April, 1882.	1879-80. 1881.
Roy, George P.	Engineering Staff, Public Works, harbours, Quebec.	1881-82, 1884.
Roy, Joseph R.	Engineering Staff, Public Works, river and harbour surveys, Quebec. Associate Member of Canadian Society of Civil Engineers.	1883-84. 24th Feb., 1887.
Royal Staff Corps, Imperial Government.	Cascades, Split Rock, Coteau du Lac, Old Fort. Canals enlarged, locks 12 feet wide, water 3½ feet. Ordnance canals, north side River Ottawa, at Carillon, Chute à Blondeau and Grenville. Locks 108 by 20 and 130¾ by 32½, with 6 feet water on sills, designed. Completed.	1817. 1819. 1833.
Rubidge, F. P.	Assistant Chief Engineer, Public Works, and Architect of Canada prior to and after Confederation. Report on proposed landing piers below Quebec. In charge of surveys and investigations, &c., Lake St. Peter Report on River L'Assomption lock, dam and dredging. do bridges, &c., Province of Quebec, &c. Plans of bridges constructed across Rivers St. Maurice, Champlain, Ste Anne de la Pérade, Jacques Cartier, on Provincial Highway, north shore of St. Lawrence,— and Rivers Etchemin, Becancour, Godfroi, Nicolet, Mel- bourne, Chateauguay, &c., on Main Roads, south side of St. Lawrence. Projected docks at "Cap Rouge," above Quebec. Survey and report.	15th Dec., 1841, to July, 1871. 15th Nov., 1846. 1847. 27th Dec., 1848. 29th Nov., 1848. 1843 to 1849. 1846.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Rubidge F. P.	Construction and improvements Parliament buildings and residences of Governors General, &c., at Quebec, Montreal and Toronto.	1844 to 1865.
	Fourteen District Court Houses and Jails constructed in Province of Quebec.	1859 to 1862.
	Commission of Enquiry, Ottawa Parliament and Departmental Buildings.	1862-63.
	Improvements—Governor General's residence, at Rideau Hall, Ottawa.	1865-1871.
	Reports on buildings and other works.	1846 to 1871.
	Superannuated.	July, 1871.
	Residing in Montreal.	Dec., 1889.
Rubidge, Thomas S.	Engineering Staff, Williamsburgh Canal, construction.	1844.
	Superintending Engineer, deepening Galops Rapids, work commenced 1876 and completed 1882.	1875 to 1882.
	Superintending Engineer, Murray Canal, between Bay of Quinte and Presqu'île Bay, north shore Lake Ontario.	1881 to 1886.
	Superintending Engineer, Burleigh Canal, Buckhorn Canal, Fenelon Falls Canal, &c., on the River Trent, works commenced 1882, completed 1888.	1881 to 1888.
	Superintending Engineer, Williamsburg Canals. Enlargement, &c.	1880.
	Superintending Engineer, Cornwall Canal enlargement, &c. Work commenced 1876 on lower half from Cornwall upwards.	1876-1889.
Russell, Lindsay A.	Engineering Staff, Public Works, survey Dawson Route. Fort William on River Kaministiquia near Thunder Bay, Lake Superior, to Fort Garry (Winnipeg), Manitoba.	1857-1859.
Russell, Alexander J.	Superintending Engineer, roads and bridges along north shore Baie des Chaleurs from Cross Point to Gaspé Basin.	1841 to June, 1846.
	Rimouski bridge contract, S. Bradley, and Jos. Garon.	23rd Nov., 1844.
Scott, David.	Assistant Engineer, Ottawa River slides and booms.	1st Oct., 1854-89.
Scott, W. L.	Assistant Engineer, Montreal Harbour Commissioners.	19th May, 1875.
Secord, William F.	Engineering Staff, S. Division, Welland Canal enlargement.	Oct., 1872.
Shanly, Frank.	Formerly City Engineer of Toronto. Appointed Chief Engineer, Intercolonial Railway.	23rd June, 1880.
	Died 13th Sept., 1882.	
Shanly, Robert.	Ottawa Canal survey to Lake Huron.	1857-58.
Shanly, Walter.	Superintending Engineer, Beauharnois Canal construction.	1842-48.
	Chief Engineer Bytown and Prescott Railway.	1851-54.
	Proposed ship canals, River Ottawa, Montreal to Lake Huron.	1857-58.
	Inspector of railways and engineer on various works.	29th Oct., 1864-89.
	Elected Member of the House of Commons, 1863-72, July, 1885-90.	
	Member Canadian Society of Civil Engineers.	24th Feb., 1887.
Shaw, W. M.	Specifications, &c., Hamilton and Port Dover Road, London and Brantford, Brantford and Woodstock.	1842-44.
Simmons, Lieut. J. A., Royal Engineer.	Report of an experiment made at Quebec, 13th July, 1840, to destroy a barrier gate by gunpowder.	17th July, 1840.
Sims, A. H.	Reports on roads, &c., District of Gaspé.	1847-48.
Simpson, Frank.	Engineering Staff, Welland Canal, N. Division.	1876.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Sippell, John G.	Superintending Engineer, canals, Province of Quebec, excepting Ottawa ordnance canals, until 1857 Superintending Engineer, Lachine and Ottawa canals enlargement Consulting Engineer, Lachine and Ottawa canals Died, 28th September, 1879.	July, 1853 to 1877. 1870 to 1877. 1877-79.
Sirois, Joseph Eustache..	Engineering Staff, harbour works, below Quebec and straightening of ship channel between Quebec and Ile-aux-Coudres	1881-89.
Slater, James Dyson	Welland Canal, Assistant Engineer Assistant Engineer on the Ottawa River slides and booms.. Engineer on macadamized roads, Ottawa to Aylmer and Bell's Corners Resident Engineer, location and construction of Bytown and Prescott Railway, under Walter Shanly, Chief Engineer Montreal, Bytown and Pembroke railway surveys Ottawa ship canal survey, with James Stewart, C.E., &c., Robert Shanly, G. H. Perry, T. E. Norman and Mackenzie Superintending Engineer, Rideau Canal, &c. Resigned on 12th September, 1872. Died, 26th October, 1876.	1842-46. 1846 to 1849. 1849-51. 1851-54. 1854-56. 1857-58. 10th June, 1858, to 1st Oct., 1872.
Smith, D. C.	Superintendent of light-houses above Montreal Died, 1st May, 1880.	21st June, 1855-80.
Smith, Col. J. C., R.E..	Joint report and estimate of proposed Rideau Canal works, together with Lieut.-Col. Sir G. Hoste and Major Harris, R.E., recommending locks 108 by 20 feet with a depth of 5 feet water	1825.
Snow, W. B.	Engineering Staff, Public Works, Ottawa Harbour surveys, Ontario, Quebec and Maritime Provinces Previously employed chiefly on railways and other important works in England where he acted as agent to the Bishop of Durham, after which he was employed in Africa On various works in Canada	1st Aug., 1880-89. 1882 to 1887. 1837 to 1876. 1876 to 1880.
Soare W. F.	Engineering Staff, Public Works, harbours, Ontario Died at Port Stanley, 1889.	1885.
Spence, J. B.	Engineering Staff, Railways and Canals, Ottawa, &c.	Oct., 1876-89.
Starke, David.	Secretary Commission of Enquiry, Ottawa Parliament Buildings Report on supplementary survey, Baie Verte Canal Superintending Engineer, River Ottawa canals do River Trent, new works, completion	1862-63. 27th Dec., 1872. 1st May, 1880-89. April, 1887-88.
St. George, Percival W..	On Flood Commission, Montreal Engineer and road surveyor, Corporation of Montreal Member of Council, Canadian Society of Civil Engineers..	1886-88. 1889 and previously. 1887-1890.
St. Laurent, Arthur.	Engineering Staff, Public Works, harbour surveys, Province of Quebec	1885-89.
Steckel, Louis Joseph René.	Assistant Engineer of G. F. Baillairgé on survey of south shore St. Lawrence, Gulf Road, Ste. Anne des Monts to Cape Rosiers and Gaspé Basin Engineering Staff, Public Works, Ontario and Quebec Survey and borings, Princess Louise Basins, Quebec Engineering Staff, Chief Clerk, Canada Hydrographic survey and Geodetic levels, Rivers St. Lawrence and Richelieu Member Canadian Society of Civil Engineers	Jan., 1861-62. April, 1863-74. 1875-76. 1st July, 1880. July, 1881-89. 9th Feb., 1888.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Stevenson, Alexander...	Survey with André Trudeau for projected canal between Lakes St. Francis and St. Louis Report on projected Beauharnois Canal by A. Stevenson and N. H. Baird Adopted on recommendation of Samuel Keefer in his report, 17th February, 1842.	1830-31. 1835.
Stewart, James.....	Engineering Staff, Public Works, &c., on various works... Map of ice shoves at Montreal, St. Ours Lock, Beauharnois Canal Road proposed from Malbaie to Ha! Ha! Bay, Saguenay.. Survey and plans, proposed piers below Quebec First General Report on Public Works up to Beauharnois and Lachine Canals surveys and new works... On Grand Trunk Railway Ottawa and Lake Huron proposed ship canal survey See Walter Shanly's Report, 22nd March, 1858.	1843 to 1858. 1843-44-45. 1847. 1846-47. 1849. 1847-54. 1854-55-56. 1857-58.
Stoker, George.....	Assistant Engineer, Welland Canal.....	1864.
Strong, W. O.....	Engineer in charge, under H. F. Perley, Chief Engineer of Public Works, of Graving or Dry Dock at Kingston, Lake Ontario Plans and specification of dock, signed by H. F. Perley, Chief Engineer of Public Works..... Length of dock, 280 feet. Width of dock, 72 feet at coping level. Entrance width of dock, 48 feet. Depth at entrance of dock, 15½ feet below the low water of Lake Ontario. Height of water varies 5½ feet. Contract signed by N. K. and M. K. Connolly and commenced Date of completion stipulated Estimated cost, \$260,680.75.	1st Dec., 1888-90. 14th Feb., 1889. 23rd April, 1889. 23rd April, 1891.
Sullivan, J. H.....	Engineering Staff, Public Works, improvement of rivers, &c. Resident Engineer, deepening feeder, Lake St. Francis to River St. Louis River Assiniboine improvement.....	1880-87. 1883-85. 1886.
Summerville, Peter.....	Assistant Engineer, Public Works, surveys Victoria Harbour and Fraser River, British Columbia..... Member Canadian Society of Civil Engineers.....	1st Aug., 1783, to 6th July, 1887. 9th Feb., 1888.
Sutcliffe, John.....	Engineering Staff, Lachine Canal enlargement..... do Ste. Anne Canal..... St. Gabriel Basins, Lachine Canal..... Left service, May, 1886. Member Canadian Society of Civil Engineers.....	15th July, 1872-81. July, 1881-86. Aug., 1882-86. 27th June, 1888.
Sutherland, Hugh.....	Superintending Engineer, Fort Frances Canal, at foot of Rainy Lake, on the Dawson route..... Canal, 800 feet long, with a lock 200 by 36½ feet, and 7 feet depth of water on lower sill during low water, opening navigation from Kettle Falls, at Head of Rainy Lake, to N.-W. angle of Lake of the Woods, 164 miles. Work commenced do completed, except lock gates..... Cost of construction, \$288,278.51, to..... See Baillairgé, Hazlewood, Mortimer, H. Thompson.	1875-79. 14th June, 1875. 1878. 22nd Jan., 1879.
Swift, W. H. (from Boston, U.S.).....	Consulting Engineer, Caughnawaga Canal, recommends route proposed by J. B. Mills, 19th February, 1848....	6th June, 1855.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Symmes, H. R.	Superintending Engineer, River St. Maurice, slides and booms, &c. Died 8th October, 1875.	24th Feb., 1858 to 8th Oct., 1875.
Taché, Joseph Charles. .	Engineering Staff at Head-quarters. Chief Draughtsman. Harbour works, &c., below Quebec, surveys and construction.	29th Jan., 1872. 1st July, 1883. 1882 to 1889.
Tait, Charles Maitland. .	Employed on survey of Beauharnois Canal.	1842.
Tait, T. M.	Engineer of harbour works, Montreal.	1845 to 1848.
Talcott, W. H.	Survey, report and estimates, St. Peter's Canal.	1856.
Taylor, David.	Survey of canal route, Lake Huron to Ottawa River. Reported thereon together with David Thompson and William Hawkins, to the Hon. John Macaulay, Surveyor General of Upper Canada, John S. Cartwright and Capt. Baddeley, Royal Engineers, according to an Act of the Parliament of Upper Canada, of 4th March, 1837. <i>See App. 30, pp. 837 to 847, by G. F. B., Public Works Report, 1867-82.</i>	1837.
Telford, Thomas.	Report on projected Baie Verte Canal between Bay of Fundy and Gulf of St. Lawrence.	1826.
Temple, E. B.	Resident Engineer, Toronto Harbour works.	April, 1888.
Thom, G., Brevet Brigadier General, U.S.A..	Report on saw-dust obstruction in navigable rivers.	27th Aug., 1872.
Thompson, David.	Astronomer and Surveyor, engaged in surveying and defining boundary line, for Great Britain, between Canada and the United States. In the report of the British and United States Commissioners appointed to trace the line of boundary under Art. VII of the Treaty of Ghent, dated 23rd Oct., 1826, Mr. Thompson is spoken of as principal surveyor to the Board and as signing in that capacity the 34 maps prepared. <i>See Hertslet's Commercial Treaties, vol. 13, page 906.</i> On the River St. Lawrence. Survey of Lake of the Woods. Survey of Lake St. Francis, &c. Survey of canal route, Lake Huron to Ottawa River. Survey of Lake St. Peter channel and estimate of proposed dredging for ship channel.	1816 to 1827. 1817. 1825. 1832-34. 1837. 1841.
Thompson, E. W.	Assistant Engineer, Carillon Canal, new locks and dam.	July, 1872.
Thompson, H.	Assistant Engineer of Hugh Sutherland, Fort Frances Canal, at the foot of Rainy Lake. <i>See Baillairgé, Hazlewood, Mortimer, Sutherland.</i>	1875-79.
Thompson, H. B.	Lachine Canal enlargement. Assistant Resident Engineer, Culbute Canal, Upper Ottawa	Dec., 1872. Sept., 1873.
Thompson, H. G.	Reports on surveys and maps, with soundings of River St. Lawrence above Lake St. Louis.	Sept. & Dec., 1836-42.
Thompson, Lieut.-Col. .	Royal Engineer under the Imperial Government. Succeeded Major Bolton, R.E., as Superintending Engineer of the Rideau Canal.	

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Thompson, W. G. McNeill.....	Mechanics Institute, Civil Engineers, England. Resident Engineer, Southern Division, Welland Canal enlargement Assistant Engineer, Saut St. Marie Canal, Canada Entered the service of the Dominion Government in April, 1868, as Division Engineer on surveys and location of the Intercolonial Railway, and served in Nova Scotia, New Brunswick and Quebec Provinces until the spring of 1872. In charge of the survey of Lake St. Louis Adolphe Larue, P.L.S., surveyed Lake St. Louis, 1836.	1872-88. Jan., 1889. Spring, 1872.
Tibbett, Hiram.....	Description of a projected route for the Welland Canal....	1823.
Tomlinson, Joseph.....	Engineering Staff, Public Works, Canada Superintending Engineer, light-houses, Canada Inspector of bridges on railways, &c. Superannuated.....	1st Jan., 1870. 5th May, 1871-80. 9th Feb., 1880-86. 16th Oct., 1886.
Townsend, T. B.	Engineering Staff of Chief Engineer, Public Works, Ottawa Contractor for lock gates, Welland Canal enlargement.....	Sept., 1872-80. 17th July, 1880, to 29th July, 1882.
Tracy, B. H.	Survey of projected Caughnawaga Canal route, from Lake St. Louis to Lake Champlain..... <i>See</i> Mills, Jarvis, Gamble, Swift.	1854.
Tremblay, A. J.	Engineering Staff, harbour surveys below Quebec..... Student Canadian Society of Civil Engineers.....	1888. 20th Jan., 1887.
Trudeau, André.....	Survey with Alex. Stevenson in connection with improvements of water communication between Lakes St. Francis and St. Louis.....	1830-31.
Trudeau, Louis E.	Engineering Staff, harbour surveys, &c. do canals, &c., Province of Quebec.....	July, 1875-80. 1880-89.
Trudeau, Toussaint....	Assistant Engineer on railways, &c., Canada and United States Appointed Secretary of Public Works, Ontario and Quebec. Chief Engineer, Public Works..... Assistant Commissioner, Public Works, Ontario and Quebec Deputy Minister Public Works, Canada do Railways and Canals, Canada.....	1846 to 1859. 13th Dec., 1859-64. 8th March, 1864. 15th March, 1864. May, 1868-79. 22nd Sept., 1879-90
Trutch, Sir J. W., C.M.G.	In charge of Public Works, including Esquimalt Graving Dock, British Columbia Previously Lieut.-Governor of British Columbia. Member Canadian Society of Civil Engineers.....	1881 to Jan., 1888. 17th Sept., 1887.
Tully, Kivas.....	Engineer, Toronto Harbour Commissioners..... Proposed Georgian Bay Canal, Lake Ontario to Lake Huron.	1853-88. 1845-51.
Twiss, Capt.....	Commanding Officer of the Royal Engineers. The first canals on the north side of the St. Lawrence, between Lakes St. Louis and St. Francis, were constructed under this engineer, as designed by Governor Haldimand, between the years..... They were located at the Cascades, Split Rock, Trou du Moulin and Côteau du Lac, the locks being from 6 to 7 feet in width between the gates with a depth of 2 to 2½ feet of water on the sills, for the passage of small boats, with from 39 to 40 barrels of flour. 263 bateaux, at 10s., 2 canoes and 1 boat, at 5s. each = £132 5 0, for tolls, passed through the	1779 and 1783.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Twiss, Capt.	then existing canals, during the season of 1781. <i>See</i> his report dated For further details subsequent to the above <i>see</i> record of Col. Gotther Mann, R.E.	3rd Dec., 1781.
Valiquetie, Ulric.....	Engineering Staff, Public Works, Ottawa and below Quebec	May, 1880-89.
Vaughan, Captain	Superintendent of dredging, new straight channel, Lake St. Peter In charge of light-house at Belle-Ile. Died at Quebec, 9th Dec., 1869.	1844-46. 1855-61.
Walton, D. S.	Engineering Staff, Lachine Canal enlargement, St. Ours Lock and dam, Chambly Canal, roads, bridges, &c., Hull to Grenville, Bytown to l'Orignal, &c.	1843-49.
Weller, J. L.	Engineering Staff, New Trent Canals do Cornwall Canal enlargement, lower half	July, 1882-89. Aug., 1888-89.
Wells, Alexander W....	Engineering Staff survey, proposed Dawson Route, from Fort William, on the River Kaministiquia, Thunder Bay, Lake Superior, to Fort Garry or Winnipeg, Manitoba.	1857 to 1859.
Wells, Arthur	Engineering Staff, Public Works, Ontario and Quebec, roads, Eastern Townships, and Lachine Canal enlarge- ment, &c.	1846.
West, James.....	Specification, bridge across westerley channel of the River Rideau, near its mouth.	5th July, 1845.
Westmacott, Lieut. S., R.E.	Proposed Georgian Bay, Lake Huron and Ottawa Canal.. Report on causes of floods at Montreal.	23rd Feb., 1856. 29th June, 1841.
White, Lieut. H. A., R.E.	Report on experiment made at Quebec to destroy Sally Port gates with gunpowder.	11th July, 1840.
Williams, J. B.	Engineering Staff, Public Works, River Saskatchewan improvement, &c., N.W.T.	1885-87.
Wise, Frederick Ashford Milbank	Engineering Staff, survey of route for proposed Saut-Ste- Marie Canal, under S. Keefer, Chief Engineer of Public Works, Canada On Engineering Staff, Grand Trunk Railway, construction and maintenance. On Engineering Staff, Public Works, surveys, harbours, &c., Ontario. Resident Engineer, on the construction of the Erie and Niagara Railway, and the Buffalo and Salamanca Branch of the Atlantic and Great Western Railway... Chief Engineer of the St. Lawrence and Ottawa Railway, and Assistant Engineer of the Ottawa Water Works.. Superintending Engineer, Rideau Canal, Ottawa to Kings- ton. Superintending Engineer of the reconstruction of the Tay Canal, from Rideau Lake to the Town of Perth, Ontario Old canal $8\frac{1}{2}$ miles long, with 5 locks of $100 \times 20 \times$ 4 feet depth of water on sills. Total rise, 28 feet. Built 1831-34, by a private company, under Act William IV, Chap. 2, Sec. 1, and other acts. New canal 7 miles long, with 2 locks, each of 13 feet lift, and 134×32 with $5\frac{1}{2}$ feet depth of water on sills during low water of river and lakes. Built by Manning & Co., contractors.. And by W. Davis & Co., Contractors. New canal to be opened.	1852. 1853 to 1860. 1860-63. 1864-66. 1866-72. 1872-90. 1882-89. 1831. 15th June, 1883 to 12th July, 1888. 12th July, 1888-90. 30th June, 1890.

ENGINEERS Employed on Public Works, Canada—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Wise, Frederick Ashford Milbank.....	Mr. Wise became a member of Canadian Society of Civil Engineers.....	20th Jan., 1887.
Wolfe, Major Alex. Jos..	Superintending Engineer, Kempt Road, from St. Octave de Métis, near the River St. Lawrence, to Cross Point, Baie des Chaleurs.....	1830-32.
Wright, Benjamin.....	Projected Welland Canal enlargement..... do Williamsburgh Canals..... Consulting Engineer, Cornwall Canal.....	1833. 1833. 1833.
Wright, G. B.....	Fraser River improvements, British Columbia, report.....	1875-80.
Yule, Capt. P., R.E....	Superintendent, construction and repairs of St. Lawrence Canals..... Report on St. Lawrence Canals..... Plans, canal and lock proposed at Ste. Anne, south side River Ottawa, instead of old lock, built 1816, in Vaudreuil channel between Ile Perrot and Vaudreuil, of wood..... New stone lock, north side of river, 190 by 45 feet, with 6 feet water on sills, built 1840-43. Enlarged stone lock 200 × 45 with 9 feet water on sills and a new channel with crib work and embankment on each side, in the river below the lock, commenced in 1873 and completed towards 1883.	1830. 1833. 1885.

N.B.—See notes on title page and the Addenda which follow on next page.—G.F.B.

ADDENDA to "Engineers Employed on Public Works, Canada."—*Continued.*

Engineers.	Works.	Dates of Employment, &c.
Almoy, J	Report on Sault Ste. Marie Canal to Legislature, State of Michigan previous to <i>See</i> Report of Hon. H. H. Killaly	1847. 30th March, 1847.
Bailey, C. E.	From Kingston, Ontario, Provincial Engineer, P.E.I. Died 1882. No successor appointed.	1877 to 1882.
Beckwith, Adolphus G. .	Provincial Engineer, N.B. Succeeded Walter M. Buck who died.	Dates not ascertained.
Ford, Capt., R.E.	Superintendent of Works, Grenville Canal.	1846.
Gordon, Lieut., R.E.	Engineering Staff, Grenville Canal	1844.
Gregory, Charles Currie, C.E.	Assistant Engineer, Sarnia Branch Great Western Railway do European & North Western—now Intercolonial Railway—Upper Salisbury Division. Engineer, City of Fredericton, N.B. European & North American Railway. In charge Eastern Division	1857-59. 1859 to 1861. 1862 to 1867. 1867 to 1869.
	Preliminary location, Carleton Branch Railway	1870.
	Chief Engineer, construction Prince Edward Island Railway	1871 to 1875.
	Engineer in charge alternative surveys North Shore Railway, Quebec.	1876.
	Chief Engineer Eastern Extension, Nova Scotia	1876 to 1878
	Arbitrator in case—Canadian Pacific Ry. <i>vs.</i> The Queen.	1889-90.
Hadden, Lieut., R.E.	Engineering Staff, Grenville Canal	1834.
Hayes, Capt., Royal Staff Corps.	Engineering Staff, Grenville Canal	1834.
Howorth, Lieut., R.E.	Engineering Staff, Grenville Canal	1836.
Murphy, Martin.	Provincial Engineer, Nova Scotia, Superintending Engineer of all works of a provincial nature in that Province.	1867-1890.
Rendel, J. M., C.E.	"A Civil Engineer of considerable eminence." Consulting Engineer with Hon. H. H. Killaly, Capt. Bayfield and Capt. Beaufort, on the Lake St. Peter navigation project.— <i>See</i> Killaly's Report.	1843-44.
Smythe, Major General J. Carmichael.	Reported to the Board of Ordnance adverse to Col. By's "enlarged views" touching the construction of projected canals. Col. By wrote to General Mann, 13th July, 1826, recommending that for commercial and military purposes, it was expedient to construct the canals of sufficient size to admit the passage of steamers 110 to 130 feet in length, 40 to 50 feet wide, and drawing 8 feet of water. The following were the canals referred to by Col. By and his estimate of their cost, viz. :— Welland Canal, £400,000 ; Rideau, £400,000 ; Grenville, £100,000 ; north side Island of Montreal, £150,000 ; Richelieu, £150,000. In deference to Major General Smyth's Report, the canals were ordered to be constructed on the limited dimensions first determined on. <i>See</i> Mr. Douglas Brymner, Archivist's Report, 1889.	
Stehelin, Capt., R.E.	General Superintending Engineer construction Grenville Canal, between	1819 and 1833.
Taylor, Thomas Dixon, R.E.	Assistant Engineer, construction Intercolonial Railway. Surveys and construction Canadian Pacific Railway. also part of.	May, '69, to Dec., '74. Feb., '75, to Sept., '77. 1878-79 and '80.

ADDENDA to "Engineers employed on Public Works, Canada."—*Concluded.*

Engineers.	Works.	Dates of Employment, &c.
Taylor, Thomas Dixon, R.E.	Railway survey, Newfoundland..... Resident Engineer Tay Canal.....	July to Dec., 1880. March, 1882, to Jan., 1889.
Vavasour, Lieut., R.E...	Engineering Staff, Grenville Canal.....	1840.
Walsh, Edmund J.....	Assistant Engineer, Municipality and County Works, Province of Ontario..... Assistant Engineer, C.P.R., Rocky Mountain Division... do Northern Pacific Railway & O. T. Co. Assistant and Division Engineer, C. P. Railway..... Assistant Engineer, Cape Breton Railway—for Department of Railways and Canals..... Engineer in charge of Division on Harvey and Salisbury Location Surveys—for Department of Railways and Canals....	1877-1880. 1881. 1882. 1882-1885. 1885 to 1889. 1889-1890.
White, Lieut., R.E.	Engineering Staff, Grenville Canal.....	1844.

APPENDIX No. 20.

OFFICIAL CORRESPONDENCE

From 1st July, 1867, to 30th June, 1889.

APPENDIX No. 20.

OFFICIAL CORRESPONDENCE.

LETTERS Received and Sent from 1st July, 1867, to 30th June, 1889.

Years.	Received.	Sent.
1867—From 1st July to 31st December.....	2,075	1,511
1868 do 1st January to 31st December.....	3,498	2,317
1869 do do do	3,448	2,171
1870 do do do	4,961	3,185
1871 do do do	6,268	3,983
1872 do do do	8,333	4,428
1873 do do do	10,072	5,707
1874 do do do	9,800	5,043
1875 do do do	9,006	5,006
1876 do do do	7,971	4,773
1877 do do do	7,517	4,425
1878 do do do	6,886	4,021
1879 do do to 6th October	7,186	4,547
1879 do 7th October to 31st December.....	2,033	810
1880 do 1st January do	8,451	4,410
1881 do do do	9,599	5,529
1882 do do do	10,505	5,699
1883 do do do	11,633	6,227
1884 do do do	13,114	6,903
1885 do do do	8,977	5,321
1886 do do do	9,644	5,352
1887 do do to 30th June.....	4,866	2,735
1887 do 1st July do 1888.....	10,493	6,343
1888 do do do 1889.....	10,522	7,042

NUMBER of Cheques sent by Accountant's to Secretary's Branch and Mailed, from 1882 to 1889.

Year.		Nc.
1882.....	From 22nd September to 30th June, 1883	1,566
1883.....	do 1st July do 1884	3,366
1884.....	do do do 1885	3,298
1885.....	do do do 1886.....	3,466
1886.....	do do do 1887	4,198
1887.....	do do do 1888.....	4,692
1888.....	do do do 1889.....	4,960

CHEQUES issued by Finance Department and Mailed from Secretary's Branch.

Year.		No.
1885.....	From 1st April to 30th June, 1885.....	245
1885.....	do 1st July do 1886.....	954
1886.....	do do do 1887.....	1,158
1887.....	do do do 1888.....	918
1888.....	do do do 1889.....	887

LETTERS Received and Sent, Chief Architect's Office, from 1st January, 1880, to 30th June, 1889.

Years.	Received.	Sent.
1880—From 1st January to 30th June.....		1,273
1880 do 1st July do 1881.....		2,943
1881 do do do 1882.....		2,859
1882 do do do 1883.....	3,538	4,600
1883 do do do 1884.....	3,860	6,004
1884 do do do 1885.....	4,500	6,718
1885 do do do 1886.....	6,075	6,450
1886 do do do 1887.....	6,816	6,380
1887 do do do 1888.....	6,947	6,870
1888 do do do 1889.....	6,484	7,667

LETTERS sent from Chief Engineer's Office from 10th January, 1880, to 30th June, 1889.

Year.		No.
1880.....	From 10th January to 30th June.....	418
1880.....	do 1st July do 1881.....	1,795
1881.....	do do do 1882.....	2,352
1882.....	do do do 1883.....	2,651
1883.....	do do do 1884.....	3,611
1884.....	do do do 1885.....	3,119
1885.....	do do do 1886.....	2,867
1886.....	do do do 1887.....	3,281
1887.....	do do do 1888.....	3,552
1888.....	do do do 1889.....	4,229

NOTE.—The letters, including returns, received in the Chief Engineer's Office may be estimated at the rate of two received to one sent.

APPENDIX No. 21.

STATEMENT

OF

SLIDE AND BOOM DUES.

OTTAWA DISTRICT.

250 STATEMENT of Slide and Boom Dues outstanding at Ottawa on 30th June, 1889, remaining uncollected on the 30th September, 1889, and Amounts since collected to the 30th November, 1889, inclusive.

REFERENCE No. 103,990.

By Whom Due.	Bad and Doubtful Debts.	Chaudière Boonage in Suspense. — See note A	Other Slide and Boom Dues.	Ordinary Slide and Boom Dues.	Total Dues outstanding on 30th Sept., 1889.	Year to which Dues belong.	Amounts since collected to 30th Nov., 1889, inclusive.	Remarks.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.		\$ cts.	
John & Wm. McLean.....	53 14				53 14	1873		Insolvent.
James Yuill.....	9 29				9 29	1876		Overcharge.
John Rowan.....	342 50				342 50	1872 and 1873		Insolvent.
Lemieux & Charette.....	21 30				21 30	1873		do
Taillon & Lapierre.....	148 10				148 10	1873 and 1874		do
Mosgrove & McHarry.....	261 42				261 42	1873 and 1874		do
W. C. Wells.....	600 90				600 90	1873 and 1874		do
Dufresne & McGarity.....	528 80				528 80	1874 and 1875		do
Walton Smith.....	171 46				171 46	1874 and 1875		do
A. H. Baldwin.....	3,507 92				3,507 62	1871 to 1874		do
Hon. James Skead.....	9,807 65				9,807 65	1861-'63-'64-1878		do
Batson & Currier.....	5,558 70				5,558 70	1875 to 1877		do
A. F. A. Knight.....	546 30				546 30	1878		do
James Walker.....	11 25				11 25	1877		do
R. Campbell & Son.....	283 50				1,558 50	1879 to 1881		do
W. C. Edwards & Co.....					2,502 55	1886 and 1888	2,022 18	\$480.37 is an overcharge.
John R. Booth.....					10,270 81	1881 to 1888		\$398.88 counter claim damage by breaking of Counter boom.
Perley & Pattee.....			2,455 06		11,344 91	1867 and 1868		\$2,035.96 counter claim damage by Madawaska boom breaking.
The Bronsons & Weston Lum-ber Co.....		8,880 85				1880 to 1888		\$419.10 counter claim damage by breaking of Counter boom.
Pierce & Co.....		8,180 79			8,180 79	1881 to 1885		
G. A. Grier & Co.....		462 18			462 18	1888		
Estate late Levi Young.....		1,060 59			1,060 59	1886 and 1887		
W. Mason.....		1,461 20			1,461 20	1881 to 1885		
Gilmour & Co.....		413 85			1,511 66	1881 to 1888	1,097 81	
John Rochester.....		406 27			406 27	1884		
J. & B. Grier.....		258 88			268 88	1881 to 1883		
R. & W. Conroy.....		76 84			76 84	1873		Overcharge.
		95 42			95 42	1882 and 1883		do reported in Return S 38 for March, 1886.

[1889]

McLachlin Bros	2,102 46	.....	2,102 46	1887 and 1888	Madawaska boomage, claim boom is no use to them.
A. & P. White,	101 00	.....	101 00	1881	Overcharge.
J. & G. Bryson	252 20	.....	252 20	1886	Counter claim for damage by breaking of Coulonge boom.
B. Caldwell & Son	4 33	.....	4 33	1887	Overcharge.
E. B. Eddy .....	.....	458 25	458 25	1886	Payments delayed by dispute between Mr. Eddy and Alex. Fraser as to which of them should pay.
The E. B. Eddy Manuf. Co. ....	.....	124 78	124 78	1887	Insolvent.
James G. Bryson .....	.....	73 50	73 50	1886	do
Costello Brothers .....	.....	90 62	90 62	1882	
James Dempster .....	.....	231 98	231 98	1883 to 1888	
N. E. Cornuier .....	.....	2,528 34	2,528 34	1883 to 1888	
R. Hurdman & Co. ....	.....	5,461 17	5,461 17	1887 and 1888	
Joseph Johnson .....	.....	76 13	76 13	1888	
John R. Booth .....	.....	280 00	280 00	1889	
Total	21,852 23	31,005 54	7,241 06	7,075 41	

NOTE A.—*Chaudière Boomage*.—This is a charge of $\frac{1}{3}$ of a cent on sawlogs for Chaudière Boom since 1881 under O.C. 19th June, 1880. The mill owners claim that the one-third of a cent which they pay for the Cheneaux Boom includes the charge for Chaudière Boom under the settlement made in 1880. Collection of these dues deferred by order of Minister Inland Revenue of 5th May, 1882.

RECAPITULATION.

Bad and Doubtful Debts	\$21,852 23
Chaudière Boomage in Suspense	31,005 54
Other Slide and Boom dues disputed	7,241 56
Ordinary dues of 1882 to 1888	\$12,164 76
do 1889	280 00
	<hr/>
	\$72,544 09

OTTAWA, 30th November, 1889.

NOTE.

Ordinary dues outstanding on 30th September, 1889	\$12,444 76
Of which collected to 30th November, 1889	7,075 41
	<hr/>
Ordinary dues uncollected 30th November, 1889	\$5,369 35
Other dues as above	60,099 33
	<hr/>
Outstanding 30th November, 1889	\$65,468 68

EDWARD T. SMITH,
Collector of Slide and Boom Dues.

DOMINION OF CANADA.

ANNUAL REPORT

OF THE

MINISTER OF RAILWAYS AND CANALS

FOR THE PAST

FISCAL YEAR FROM 1ST JULY, 1888, TO 30TH JUNE, 1889,

ON THE

WORKS UNDER HIS CONTROL.

SUBMITTED IN ACCORDANCE WITH THE PROVISIONS OF THE REVISED STATUTES
OF CANADA, CHAPTER 37, SECTION 28.

PRINTED BY ORDER OF THE HOUSE OF COMMONS.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1890.



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—	Welland Canal	176	234	180	238	184	242	210	272	216	222	278	224	280	228	230	
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	Chambly Canal.....	202	262					210	273	216	222	278	225	281	228	230	
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REPORT.

1888-89.

*To His Excellency Lord Stanley of Preston,
Governor General of Canada.*

MAY IT PLEASE YOUR EXCELLENCY :

I have the honour to submit the Annual Report of the Department of Railways and Canals for the fiscal year ended 30th June, 1889.

This report is submitted in accordance with the provisions of the Revised Statutes of Canada, 1886, Cap. 37, Section 28.

The Annual Reports of the Chief Engineers, together with general and special Reports from Superintendents, both of Railways and Canals, and from other Officers of the Department are given in Appendices.

Attached hereto (Appendices Nos. 1, 2 and 3) will be found statements showing the amounts expended during the past fiscal year in construction, repairs, and maintenance of the several works under the Department.

RAILWAYS.

The present Report deals with those Railways of the Dominion directly controlled by the Federal Government and others towards the construction of which subsidies have been authorized.*

There is prepared by this Department, and laid before Parliament annually, a special Statistical Report embodying returns made by the Government Railways and by Canadian railway companies, as required by statute. This report gives information as to railroad operations in Canada, including the Government roads.

The following general facts gathered from this compilation, being returns made for the fiscal year ended on the 30th of June, 1888, the last issued, will be of interest.

The number of railway companies, in operation (including under one head all amalgamated lines) was at the date mentioned, 70. The number of miles of railway completed, irrespective of sidings, is 12,701·66, of which 11,664·11 were laid with steel rails. There were 12,162·88 miles of railway in actual operation.

* It should be observed that while the usual reports furnished by the Superintending officers, and to be found in the appendices hereto, deal with the fiscal year only, the General Report of the Minister contains information on points of interest relating to subsidized lines of railway up to the end of December, 1889.

The paid up capital amounted to \$727,180,448.75. The gross earnings of all these railways amounted to \$42,159,152.65, and their working expenses to \$30,652,046.03, leaving the amount of the net earnings \$11,507,106.62. 11,416,791 passengers and 17,172,759 tons of freight were carried. The total number of miles run by trains was 37,391,206.

HALIFAX to MONTREAL.

It seems proper here to state that by the completion of certain links of railway the routes available between Halifax and Montreal are now four in number ; in all of which the Intercolonial is utilized, either in whole or in part, as follows : (The names adopted are those of the dominating roads) :—

Intercolonial Railway Route—

	Miles.
By Intercolonial Railway to Point Levis.....	675
Grand Trunk Railway to Montreal.....	173
	— 848

(Or by ferry across the St. Lawrence to Quebec, thence by North Shore Railway, C. P. R., also 173 miles).

Canadian Pacific Railway Route—

	Miles.
By Intercolonial Railway to St. John, N.B.....	275
New Brunswick Railway and Maine Central Railway to Mattawamkeag.....	146
Canadian Pacific Railway to Montreal.....	334
	— 755

Grand Trunk Railway Route—

	Miles.
By Intercolonial Railway to St. John, N.B.....	275
New Brunswick Railway.....	90
Maine Central Railway.....	224
	—
Total up to Danville Junction.....	589
By Grand Trunk Railway to Montreal.....	270
	— 859

Témiscouata Railway Route—

	Miles.
By Intercolonial Railway to St. John.....	275
New Brunswick Railway to Edmundston.....	170
Témiscouata Railway to Rivière du Loup.....	81
Intercolonial Railway to Lévis.....	115
Grand Trunk Railway to Montreal.....	173
	— 814

CANADIAN PACIFIC RAILWAY.

TRUNK LINE.

	Miles.
Quebec to St. Martin's Junction (13 miles north of Montreal).....	159
Montreal (at the head of Atlantic Ocean Navigation) to St. Martin's Junction.....	13
St. Martin's Junction to Callander.....	331
Callander to Port Arthur.....	649
Port Arthur to Red River (opposite Winnipeg)...	428
Red River to Savona's Ferry.....	1,257
Savona's Ferry to the waters of the Pacific Ocean at Port Moody.....	213
	2,547
Port Moody to Vancouver on Burrard Inlet.....	15
Total, Montreal to Vancouver, Burrard Inlet.....	2,906

For this portion the Company were subsidized direct by the Government under their contract.

By the Act 51 Vic., c. 32, approval and ratification were given to a certain agreement dated the 18th of April, 1888, provisionally made between the Government and the company, whereby the restrictions contained in article fifteen of the original agreement for the construction of the road, barring the Dominion Parliament for 20 years from authorizing the construction of railways south of the Canadian Pacific Railway from any point at or near that road except those running south-west, were removed. By this agreement the Government undertook to guarantee the payment of interest at 3½ per cent. on an issue of the company's bonds to the extent of fifteen million dollars, running for a term not exceeding fifty years ; the unsold lands of the company's subsidy, estimated at nearly 15 million acres, to form the security for such bonds. The arrangements contemplated by this agreement are being carried out by the Department of Finance. A deed of mortgage in favour of special trustees, one of whom is the Minister of Finance, has been executed under date the 2nd of June, 1888, having previously been approved by an Order in Council of the 1st of that month, being a mortgage of the said unsold lands of the company's subsidy, amounting to 14,934,238 acres, constitutes the said security.

In the agreement dated the 20th of November, 1886, and executed under an Order in Council of the 2nd of that month, which constituted the basis of the final settlement of matters between the Government and the company prior to the transfer of the road to them, a special provision was inserted in view of dispute as to the condition in which the work in British Columbia executed by the Government should be handed over, the company accepting the same " subject to the adjustment and correction by the Government of any defects or deficiencies in the construction thereof, if any, according to the specifications and conditions of the contracts therefor, except in so far as the same were modified by the Government prior to October twenty-first, 1880. " *

* The date of the company's contract.

For the determination of the questions covered by the foregoing, a special arbitration was authorized by an Order in Council of the 5th of January, 1888, and the arbitrators, subsequently appointed, have held sittings at Vancouver and Ottawa, examining the line and hearing evidence on both sides. This arbitration is not yet concluded.

GOVERNMENT RAILWAYS IN OPERATION.

The several lines operated and maintained by the Government during the past fiscal year, ended the 30th June, 1889, were:—

	Miles.
The Intercolonial and its extensions.....	894
Eastern Extension Railway	80
Windsor Branch (maintained only).....	32
Prince Edward Island.....	211
Total Mileage.....	<u>1,217</u>

The through ocean mail line from Point Lévis, opposite Quebec, to Halifax, is 675 miles in length.

Details respecting these railways and their operations will be found in Appendices Nos. 5 and 6, from the Chief Engineer and General Manager, and from the Chief Superintendents and other officials of the road.

The General Revenue Accounts for 1888-89 show the following as the financial position of these roads for the past fiscal year:—

—	Average mileage of the year.	Expenditure.	Earnings.	Profit.	Loss.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
Intercolonial	894	3,153,928 69	2,895,364 35	.....	258,564 34
Eastern Extension.....	80	90,719 04	72,436 65	.....	18,282 39
Windsor Branch (earn- ings, one-third of en- tire receipts, expen- diture on mainte- nance).....	32	20,856 50	28,372 11	7,515 61	
Prince Edward Island.	211	247,559 44	171,369 56	.....	76,189 88
				7,515 61	353,036 61
					7,515 61
Total.....	1,217	.....	.....	.....	345,521 00

INTERCOLONIAL RAILWAY.

LENGTH OF LINE.

Ocean Mail Line.

	Miles.
Point Lévis to Rivière du Loup.....	126
Rivière du Loup to Moncton.....	374
Moncton to Painsec.....	8
Painsec to Truro.....	118
Truro to Halifax.....	62
	<hr/> 688

Extensions.

Moncton to St. John.....	89
Painsec to Shediac.....	11
Truro to Pictou.....	52
Dalhousie Junction to Dalhousie.....	7
St. Charles Loop Line.....	14
Dartmouth Branch.....	5
Indiantown Branch.....	14
Pictou Town Branch.....	14
	<hr/> 206
	<hr/> 894

Wharf branches.

	Miles.
Rimouski to Wharf.....	2
Newcastle, N. B., to Deep Water Wharf.....	2
Dorchester to Shipping Wharf.....	1
Sackville to Shipping Wharf.....	0·5
Stewiacke to Wharf.....	1
Rivière du Loup Town to Wharf.....	4
	<hr/> 10·5

Capital Account.

The expenditure charged to the capital account for the year ended 30th June, 1889, is as follows:—

The total cost of road and equipment on 30th June, 1888, was.....	\$45,887,759 20
Less refunded.....	1,110 30
	<hr/> \$45,886,648 90

The additions during the year are as follows:—

Halifax Extension.....	\$ 6,784 04
Increased accommodation, Halifax....	2,798 23
do do St. John....	2,452 69
do do Moncton....	5,366 80

[1889]

Increased accommodation, Maccan....	2,999 60	
do do Spring Hill.	4,005 96	
do do Rivière du Loup.....	1,701 17	
Rolling stock.....	327,789 90	
St. Charles Branch.....	135,060 74	
Pictou Town Branch.....	65,474 27	
Dartmouth Branch.....	18,119 99	
Dalhousie Branch.....	17,400 00	
Rivière du Loup Town Branch.....	6,357 14	
Indiantown Branch.....	16,031 01	
Steam heating and electrical lighting of cars.....	41,047 91	
Original construction.....	2,948 98	
		<u>656,338 43</u>
		<u>* \$46,542,987 33</u>

Revenue Account.

The gross expenditure for the year was.....	\$3,153,928 69
The earnings were.....	2,895,364 35
Excess of expenditure over earnings.....	<u>\$ 258,564 34</u>

Compared with the previous year the earnings were as follows:—

	1888-89.	1887-88.	
Passenger traffic.....	\$ 867,170 70	\$ 845,041 65	Increase \$22,129 05
Freight do	1,882,361 01	1,909,842 04	Decrease 27,481 03
Mails and sundries....	145,832 64	157,900 16	Decrease 12,067 52

Gross earnings..	<u>\$2,895,364 35</u>	<u>\$2,912,783 85</u>
------------------	-----------------------	-----------------------

The gross earnings, compared with those of the previous year show a decrease of..... \$ 17,419 50

The gross expenditure compared with that of last year shows a decrease of..... \$122,512 92

The value of stores in hand, including steel rails and fuel, and including also old material for sale, \$48,993.25 at the end of the year 1888-89 was \$592,444 26

The engine mileage, compared with that of last year was:—

	Miles
1887-88	5,936,035
1888-89	5,486,856
Decrease.....	<u>449,149</u>

* Explanations of these several expenditures will be found on page 22 of the appendices.

The car mileage, compared with that of last year was :—

1887-88.....	56,608,930
1888-89.....	54,322,712
Decrease.....	<u>2,286,218</u>

The train mileage, compared with that of last year, was :—

1887-88.....	4,939,253
1888-89.....	4,591,087
Decrease.....	<u>348,166</u>

The working expenses per mile run by engines, were :—

	Cents.
1888-89.....	57·48
1887-88.....	55·19
Increase.....	<u>2·29</u>

The working expenses per mile run by trains, were :—

1888-89.....	68·69
1887-88.....	66·33
Increase.....	<u>2·36</u>

Working expenses per mile of railway :—

1887-88.....	\$3,723 23
1888-89.....	3,527 88
Decrease.....	<u>\$ 195 35</u>

The gross tonnage carried was :—

	Tons.
1887-88.....	1,275,995
1888-89.....	1,204,790
Decrease.....	<u>71,205</u>

The total number of passengers carried was :—

1888-89.....	1,091,189
1887-88.....	996,194
Increase.....	<u>94,995</u>

In comparison with last year's results, there was, as above shown, an increase of 94,995 in the number of passengers, and an decrease of 71,205 in the number of tons of freight carried by the road. The earnings show a decrease of \$17,419.59. The expenditure for working shows a decrease of \$122,512.92.

Of flour, there were carried 927,014 barrels, an increase of 81,264 ; of grain, 1,519,862 barrels, an increase of 308,322 ; of lumber, 197,545,777 feet, an increase of 1,100,958 feet. The live cattle business amounted to 77,661 head, a decrease of

12,778, and there was a decrease of 94,494 tons in the quantity of other goods carried, namely 814,993 tons.

The fact that the net loss on the operation of this railway last year is less than that entailed the year previous, is ascribed, by the Chief Engineer of Government Railways to the more favourable character of the winter and to the reduction in the quantity of coal carried over the line to points west of Chaudière, a class of freight which, as has been pointed out in previous reports, is not remunerative, owing to the lowness of the rates charged.

At the same time while tending to diminish expenditure, the reduced coal traffic implies a reduction in the gross receipts of the road, and to this, and further, to the anticipation of the opening of the Canadian Pacific short route from Montreal to the seaboard at St. John, through the State of Maine, which was actually opened on the 3rd of June, 1889, the Chief Engineer sets down the falling off in the gross earnings above noted. He points out that the completion of this road may be expected to result in a diminution both of traffic and earnings of the Intercolonial Railway.

Arrangements have been made by which the express trains of the Intercolonial Railway to and from Halifax connect with the Canadian Pacific Railway trains at St. John.

Though the transport of fish, both fresh and salted, shows an increase over that of last year, it is not considered that it has developed to the extent that might have been looked for from the steps taken for its encouragement in the provision of special refrigerator cars and special fast trains, and the concession of low rates. A table showing the tonnage carried since the year 1875-76 will be found in the appendices.

A statement has been furnished by the Chief Engineer of Government Railways, indicating the extent, from the same date, of the east and west-bound ocean traffic over the line. This statement shows a falling off of about 4,000 tons in each direction for the past year in comparison with the preceding year.

The expenditure on capital account of \$327,789.90 for rolling stock, comprised, among other items, the purchase of 12 locomotives and 233 box cars.

One hundred and twenty-nine miles of steel rails, weighing 56 lbs. to the yard, were replaced by heavier rails weighing 67 lbs., and 46 sidings have been constructed.

The heating of trains by steam derived from the locomotive, and the lighting of them by electricity has been further adopted with satisfactory results.

The line in all its details has been well maintained, and is in excellent running condition.

WINDSOR BRANCH.

The arrangement whereby the Windsor and Annapolis Railway Company operate this line still continues. The company pay all charges in connection with the working, two-thirds of the gross earnings being allowed them for such purpose ;

the Government taking the remaining one-third, and assuming all cost of maintenance.

All charges for superintendence and supervision of maintenance of works are borne by the Intercolonial Railway, whose chief officer performs the duty.

The earnings and expenditure for the year ended the 30th June, 1889, were as follows :—

Earnings accruing to the Government (one-third of the gross earnings).....	\$ 28,372 11
Expenditure for maintenance of way and works.....	20,856 50
Profit.....	<u>\$ 7,515 61</u>

Government earnings, in comparison with those of the previous year :—

1888-89.....	\$28,372 11
1887-88.....	24,553 55
Increase.....	<u>\$ 3,818 56</u>

Expenditure in comparison with that of the previous year :—

1887-88.....	\$24,040 33
1888-89.....	20,856 50
Decrease.....	<u>\$ 3,183 83</u>

The line has been well maintained.

EASTERN EXTENSION RAILWAY.

This line of railway is eighty miles long, extending from the Pictou Branch of the Intercolonial Railway at New Glasgow to Port Mulgrave on the Strait of Canso, thence connecting with Cape Breton by means of a ferry.

This line, with its equipment, was, on the 9th January, 1884, purchased by the Dominion Government from the Government of the Province of Nova Scotia, together with rights possessed by that Government in the Pictou Branch between Truro and Pictou; also, the ferry built for the passage of the Strait of Canso.

The road is worked by a staff directed by the chief officers of the Intercolonial.

Capital account.

Total cost of the road and equipment up to the 30th June, 1888.....	\$1,284,495 76
Additional in 1888-89.....	34,235 73
Total to 30th June, 1889.....	<u>\$1,318,731 49</u>

Revenue.

The working expenses of the year amounted to.....	\$90,719. 04
The gross earnings were.....	72,436. 65
Loss.....	<u>\$ 18,282. 39</u>

[1889]

The expenditure of the year is slightly less, and the earnings are slightly larger than in the previous year.

The extension of the wharf at Port Mulgrave and the works for the supply of water at various stations for locomotive use have caused the increase to capital account above mentioned

The road and rolling stock are in good order.

WORKS UNDER CONSTRUCTION.

OXFORD AND NEW GLASGOW DIVISION OF THE INTERCOLONIAL.

Under authority of a vote of Parliament, passed in 1882, there is being constructed a line of railway forming a comparatively straight road between two points on the Intercolonial system, namely, the Oxford station of that railway and Brown's Point on its Pictou Town Branch, the length being 67.60 miles. In addition, a branch from it 4.75 miles long, is being built from Pugwash Junction to Pugwash Harbour, making a total of 72.35 miles. The line will pass close to the towns of Oxford, Pugwash, Wallace, Tatamagouche and River John. The works though somewhat retarded owing to the rainy character of the season of 1888, are nearly completed.

CAPE BRETON DIVISION.

Under authorization of Parliament given by the Act 49 Vic., ch. 14, (1886) a line of railway is in course of construction by the Government in the Island of Cape Breton, extending from Point Tupper on the Strait of Canso (opposite the terminus of the Eastern Extension Railway at Port Mulgrave on the mainland) for a distance of 78 miles, to a point near Leatche's Creek, from which two extensions branch, one, 5 miles long, running to North Sydney, and the other, 13.75 miles long, into the town of Sydney, with a connecting line 1.25 miles long, giving communication with the International Coal Company's Railway beyond North Sydney, and thus bringing that important industry into direct line with the Intercolonial Railway system. The same advantage is afforded to the coal mines of Sydney. The total to be constructed is 98 miles. Under a special appropriation voted last Session, a bridge is being built across the Grand Narrows, which will greatly facilitate the operation of the road. All the works are well advanced towards completion, and provision for rolling stock has been made.

The road will be placed in communication with the Eastern Extension Railway by means of a ferry between Point Tupper and Port Mulgrave.

HARVEY-SALISBURY.

This is a contemplated link of railway giving a comparatively direct line *via* Fredericton from Harvey station on the New Brunswick Railway, past which the trains of the Atlantic and North-West (Canadian Pacific) Railway now run, to a point on the Intercolonial Railway near Moncton. Its completion will provide a short route the Canadian sea ports of the Atlantic, a scheme adopted by Parliament for which extensive surveys were made in 1885, and of which the larger portion, namely, from Montreal to Harvey, has already been built, under Parliamentary subsidy, and is in operation.

About 115 miles of this link are under fresh survey, and the results have successfully established that a shortening of the distance covered by the survey of 1885 can be obtained, the estimated saving in comparison of the route at present in use *viâ* St. John being 32 miles.

DIGBY AND ANNAPOLIS.

The failure of arrangements for the completion of the link of railway, 22 miles, between Digby and Annapolis, N. S., which will be found summarized further on in this report under the reference to the "Western Counties Railway Company," has resulted in the assumption by the Government, of the work of constructing this section. The sum of \$500,000, devoted to this purpose by the Act 50-51 Vic., ch. 25, which confirmed the arrangements made with the company, being applied to the work as provided for by their agreement. The works are in progress, though completion is not looked for before the middle of 1890.

The building of this section will give continuous railway communication between Yarmouth and Halifax.

PRINCE EDWARD ISLAND RAILWAY.

LENGTH OF LINE.

	Miles.
Tignish to Royalty Junction.....	113½
Royalty Junction to Mount Stewart.....	20
Mount Stewart to Georgetown.....	21
	— 154½

EXTENSIONS.

	Miles.
Cape Traverse Branch—Emerald (Formerly County Line)	
Station to Cape Traverse.....	2
Royalty Junction to Charlottetown.....	5
Mount Stewart to Souris.....	39
	— 57
	<u>210½</u>

Capital Account.

No addition having been made to the expenditure on capital account during the past fiscal year, the total cost of the road and equipment chargeable to capital account at the close of the fiscal year 1888-89, remains the same as at the close of 1887-88, namely.....\$3,741,780 89

Revenue Account.

The working expenses and receipts for the year ended 30th of June, 1889, were :—

Gross expenses.....	\$ 247,559 44
Gross earnings.....	171,369 56
	—
Excess of expenditure over earnings.....	\$ 76,189 88

The gross earnings, compared with those of the previous year, were :—

1888-89.....	\$ 171,369 56
1887-88.....	158,363 62
Increase.....	\$ 13,005 94

The gross expenditure, compared with that of the previous year, was :—

1888-89.....	\$ 247,559 44
1887-88.....	229,639 95
Increase.....	\$ 17,919 49

The engine mileage was :—

	Miles.
1888-89.....	307,540
1887-88.....	306,924
Increase	616

The train mileage was :—

1887-88.....	248,410
1888-89.....	248,294
Decrease	116

The car mileage was :—

1888-89.....	1,369,666
1887-88.....	1,309,922
Increase.....	59,744

The value of the stores on hand on the 30th June, 1889, including general stores, fuel, rails and old material (the last valued at \$7,932) was \$124,659.82.

There was an increase this year of 21,534 in the number of passengers carried, and a decrease of 3,921 tons in the quantity of freight.

The road and its equipments are in good condition.

Communication between the Prince Edward Island Railway and the Intercolonial is afforded in summer by steamer between Summerside and Point Du Chene and between Charlottetown and Pictou, and in winter by the specially built steamer "Stanley" between Georgetown and Pictou : there is also further provision made for communication by ice-boats from Cape Traverse. These cross the strait to Cape Tormentine, on the mainland, a distance of nine miles. Here, by the line of the New Brunswick and Prince Edward Island Railway Company, about forty miles in length, connection is made with the Intercolonial Railway at Sackville. This ice-boat service is conducted by the Marine Department, the mails being taken to and met at Cape Traverse by, if necessary, special trains.

The experiment of a daily, in place of a bi-weekly service on the Cape Traverse branch, does not appear to be a success, the traffic being very light.

The Canadian Pacific Railway is not included in the above, nor is the subsidy to the Canada Central, nor that to the Quebec Government for the line from Ottawa to Quebec, nor advances made on mortgage to the St. John Bridge Company, to the Albert Railway Company and to the Fredericton and St. Mary's Bridge Company.

The total number of companies to whom payments have been made on subsidy account up to the 31st of December, 1889 (with the above exceptions) is 48.

A tabulated statement of payments will be found in Appendix 3, page 8.

The following pages show, in alphabetical sequence, the position of those companies whose dealings with the Government in respect of subsidies are not yet closed. Reports of previous years give information as to companies whose subsidies have been earned and paid prior to the 1st of July, 1888.

Albert Southern Railway Company.

(See No. 36 and 151.)

By the Act 47 Vic., chap. 8 (1884), a subsidy not exceeding \$51,200 was authorised towards the construction of a line from Hopewell (now called Albert) to Alma, N. B.

Under the authority of an Order in Council of the 8th of May, 1885, a contract for this work, namely, from Albert to the mouth of Salmon River, in the parish of Alma, was made with the Albert Southern Railway Company on the 23rd of that month; the line to be completed by the 1st of July, 1887. By an Order in Council of the 4th of April, 1887, the company were permitted to change their location, a route *via* Derry's Corner being adopted.

The time for completion was extended to the 1st of July, 1888, the limit allowed by the Subsidy Act. The total payments up to the session of 1889 made to this company, amount to \$19,428.57. The balance of the subsidy, \$31,771.43, had lapsed, but was revived by the Act 52 Vic., ch. 3, of last session. From this the sum of \$1387.06 was paid prior to the 30th of June, 1889, making the total payments \$20,815.63. No further payments had been made up to the 31st of December, 1889.

Atlantic and North-West Railway Company.

(Canadian Pacific Railway Co.—See Nos. 20 and 63.)

By the Act 47 Vic., ch. 8, the grant of the following subsidy was authorised:—

“For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding \$170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work, per year for fifteen years, \$170,000.”

By the Act 48-49 Vic., ch. 58 (1885), the grant of a further subsidy was authorised as follows:—

“For a line of railway from the south bank of the St. Lawrence River, opposite or near Montreal to the harbours of St. Andrews, St. John and Halifax, *via*

Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorised by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such line of railway for a period of twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect to the subsidy thereby authorized in aid of the said line of railway."

An application having been made for the said subsidies by the International Railway Company, and they having agreed to conform to the necessary conditions and requirements, and having evidenced their ability to construct and operate the road, entry into contract with them was authorised by an Order in Council of the 19th of November, 1885, and such contract was executed on the 14th of December, 1885, they undertaking to complete a line from a point on the south bank of the St. Lawrence at or near Caughnawaga, about 9 miles above Montreal, to connect with the Intercolonial Railway at Moncton by the 1st of July, 1889.

The International Railway Company subsequently disposed of their interest in this contract to the Atlantic and North West Railway Company, and that company were accepted as contractors by an Order in Council dated the 15th of November, 1886, the agreement made thereunder being dated the 6th of December, 1886.

The Atlantic and North West Railway Company, having powers under their charter to enter into arrangements for the crossing of the State of Maine, obtained, from the Maine Central Railway Company, the privilege of acquiring running powers for 99 years over the portion of their road between Mattawamkeag and Vanceborough, on the boundary line. These arrangements were accepted by an Order in Council of the 30th of December, 1886.

The total subsidies available under vote of Parliament for this work of railway construction, amounting, as above stated, to \$250,000 a year, for a term of twenty years, it became necessary so to apportion this amount as to secure the building of the links to connect with the roads already in existence in New Brunswick and Nova Scotia leading to the harbours named.

Accordingly, an estimate of the cost of the several sections of the surveyed line, as adopted, was made, and as the result an Order in Council was passed on the 14th of June, 1886, apportioning the subsidy, the arrangement being as follows:—For the section from the River St. Lawrence to Lennoxville, \$71,100. The section from Lennoxville to Moose River is covered by the International Railway, already constructed. For the section between Moose River and Mattawamkeag, a station on the Maine Central Railway, \$115,500. From Mattawamkeag to Harvey Station on the New Brunswick Railway, running arrangements have been made over existing roads. For the section between Harvey and a point on the Intercolonial Railway near Salis-

bury Station, \$63,400. The remaining distance is by the Intercolonial Railway to Moncton.

By Orders in Council of the 3rd of September, 1886, and 24th of May, 1887, approval was given to location plans for the distance between the River St. Lawrence (at Caughnawaga) and Lennoxville, passing through the town of St. Johns, P.Q., Farnham and South Stukely to Magog, thence passing to the north of Lake Magog; the Government location being thus modified, and the distance slightly increased, namely, from 100 miles to $101\frac{55}{100}$.

The portion of the road between Caughnawaga on the South Branch of the St. Lawrence, opposite Montreal, and Sherbrooke having been practically completed, and also the portion commencing from the end of the section built by the International Railway Company, and running as far as Mattawamkeag, these two sections were inspected, and under date the 31st of December, 1888, an Order in Council was passed authorising the payment of the annual subsidy applicable, namely, \$186,600.

By the construction of these two sections and the intermediate links of already-built railway, acquired as part of the system, direct communication is now afforded between the River St. Lawrence at Caughnawaga and Harvey. Connection is made at McAdam and at Harvey with the system of the New Brunswick Railway leading to St. Andrews and St. John; thence, over the Intercolonial Railway, with Moncton and Halifax, pending the full completion of the scheme for the shorter route from Harvey to Moncton direct. A new survey is being made by the Government of the country between Harvey and Salisbury in connection with this matter.

The Atlantic and North-West Railway Company having under their charter, 42 Vic., chap. 65 (1879) power to construct a bridge across the St. Lawrence, near Lachine, submitted for approval plans for such a bridge, to be situated about a mile below the entrance of the Lachine Canal, and about nine miles above Montreal. These plans, having been favourably considered from an engineering point of view, and also with regard to navigation, were approved of by an Order in Council dated 1st of April, 1882, subsequently modified by an Order of the 14th of November, 1885. The plans so approved show a steel bridge, with stone piers, having two spans of 408 feet each, two of 269 feet each, and eight of 242 feet each. The central 216 feet of each of the two channel spans affords a height of 60 feet above ordinary summer water level; these two spans are on the cantilever principle. The bridge is completed.

By an indenture dated the 6th of December, 1886, the Canadian Pacific Railway Company have obtained a lease in perpetuity of the line and interests of the Atlantic and North-West Railway Company.

Baie des Chaleurs Railway Company.

(See Nos. 42, 6 and 158.)

The Act 47 Vic., ch. 8, authorised the expenditure of \$300,000 (revoted in the year 1885) for the construction of a branch of the Intercolonial Railway, to extend for a distance of 20 miles eastward, from Metapedia towards Paspebiac.

Tenders for the work were received, but none of them coming within the limit of expenditure authorised by Parliament, an offer made by the Baie des Chaleurs

Railway Company to build and operate this section as a part of their own road from Metapediac to Paspebiac for the amount, was accepted by an Order in Council of the 18th of September, 1885, and a provisional contract was entered into with them on the 7th of November, the section to be finished by the first of July, 1888, plans being furnished and the work supervised by the Department.

By the Act 46 Vic., ch. 25 (1883) a subsidy had been authorised in favour of this company towards the construction of their said road; the limit fixed by the Act being \$3,200 a mile, for 100 miles, or a total of \$320,000.

Provision, however, having been made, as above stated, for the building of the first 20 miles of this distance, the contract entered into with the company, also on the 7th of November, 1885, as authorised by an Order in Council, also dated the 18th of September, for the work under this subsidy, dealt with the construction of the last 80 miles only. It contained a clause under which, subject to authorisation from Parliament to that end, the portion, namely, \$3,200 a mile, applicable to the first 20 mile section of the road under the 100 mile subsidy of 1883, should be transferred to the second 20 mile section as an additional subsidy therefor, making the grant for such section \$6,400 a mile.

To this arrangement, approval of Parliament was given, the two agreements above mentioned being ratified and confirmed by the special Act 49 Vic., ch., 17; the date for the completion of the road being fixed by the Act as the 1st of December, 1888, in place of the 25th of May, 1887, as contemplated by their agreement.

By the Railway Subsidy Act of 1889, 52 Vic., ch. 3, the balance, 244,500, remaining unpaid of the subsidy mentioned in the Act 49 Vic., ch. 17, was granted to the company.

By authority of the same Act the subsidy applicable to the 30 miles between the 70th and the 100th mile was transferred to the section between the 40th and the 70th, making the grant for this section also, \$6,400 a mile. The company undertake to construct the section from the 70th to the 100th mile without subsidy, and have deposited bonds to the value of £83,000 stg. as security to that effect.

By an Order in Council of the 14th of June, 1888, the time has been further extended to the 1st of January, 1890.

Up to the end of the fiscal year, namely, the 30th June, 1889, there had been paid to the company the sum of \$375,500. A further sum of \$148,675 has since been paid, making the total payments up to the 31st of December, 1889, \$524,175, covering the distance up to the River Grand Cascapedia, the 60th mile from Metapedia.

The location has been approved up the 60th mile by Orders in Council, and the company have submitted for approval plans up to the 100th mile.

Beauharnois Junction Railway Company.

(See No. 102.)

By the Railway Subsidy Act, 50-51 Vic., ch. 25, the grant of a subsidy not exceeding \$96,000, was authorised in favour of the Beauharnois Junction Railway
[1889]

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Company, for their railway from St. Martin towards St. Anicet, the estimated distance being 30 miles.

On the 21st of November, 1887, and under the authority of Orders in Council of the 1st of October and 2nd of November, a contract for the work was made with the company, namely, from St. Martin to Valleyfield towards St. Anicet, the road to be completed by the first of December, 1888. By the Order first named approval was also given to the location of the road from its junction with the Montreal and Champlain Junction Railway at St. Martin to Valleyfield $19\frac{6.9}{100}$ miles. An inspection of the road for this distance was made, and the sum of \$54,650 was paid during the fiscal year. No further payment has been made up to the 31st of December 1889.

Belleville and North Hastings Railway Company.

(See Nos. 54 and 93.)

By the Act 48-49 Vic., ch. 59 (1885) the grant of a subsidy not exceeding \$10,500, was authorised in favour of the Belleville and Hastings Railway Company, for a line of railway, about 7 miles long, from the village of Madoc to a point of junction with the Central Ontario Railway at Eldorado, and by the Act 49 Vic., ch. 10 (1886) a further subsidy was granted to the company for the same railway, namely, \$11,900, making a total subsidy of \$22,400. Under authority of an Order in Council of the 14th of November, 1887, a contract was made with the company on the 12th of December, for the work. The road has been built, and the subsidy for the actual distance, 6.84 miles, has been paid under an Order in Council dated the 29th of December, 1888, the amount being \$21,888.

Brockville, Westport and Sault Ste. Marie Railway Company.

(See No. 48 and 181.)

By the Act 48-49 Vic., chap. 59 (1885), aid was granted to an extent not exceeding \$128,000 towards the construction of the portion between Brockville and Westport, about 40 miles, of the line of the Brockville, Westport and Sault Ste. Marie Railway.

Under the authority of an Order in Council of the 28th of April, 1886, a contract was made with the company on the 16th of July, 1886, the subsidised road to be finished by the 1st of August, 1889.

Under an Order in Council of the 26th of November, 1888, the sum of \$45,000 has been paid. The balance of the subsidy lapsed on the 1st of August, 1889, but was revoked by the Act 52, Vic., ch 3.

Brantford, Waterloo and Lake Erie Railway Company.

(See No. 104.)

By the Act 50-51 Vic., ch. 24, authority was given for the grant of a subsidy of \$57,600 to the above company for 18 miles of their railway from Brantford to Hagersville or Waterford or some intermediate point on the Canada Southern Railway.

Under an Order in Council of the 4th of August, 1888, a contract was made with the company, on the 31st, for a line from Brantford to Waterford, the work to be completed by the 1st of August, 1891. An Order of the same date approved of the location, the actual distance being $16\frac{3}{4}$ miles. No portion of the subsidy had been paid up to the 31st of December, 1889; but the company have given notification in December, 1889, that the road is ready for traffic and inspection.

Buctouche and Moncton Railway Company.

(See Nos. 65 and 101.)

By the Act 49 Vic., chap. 10 (1886), assistance was authorised for the construction of a railway about 30 miles long, to connect Buctouche, N. B., with the Intercolonial Railway at or near Moncton, the subsidy not to exceed \$96,000.

By the Act 50-51 Vic., chap. 24, an additional subsidy of \$6,400 was granted for two miles additional, the distance between the points named actually being 32 miles, making the total subsidy \$102,400.

Under an Order in Council of the 10th September, 1886, an agreement, dated the 14th of that month, was entered into with the Buctouche and Moncton Railway Company for the execution of this work by the 1st of July, 1887. Up to the close of the fiscal year 1886-87 the sum of \$61,053.57 had been paid from the company's subsidy as the value of old rails furnished from the Intercolonial Railway and no further payment has been made up to the 31st of December, 1889.

Canada Atlantic Railway Company.

(See Nos. 60, 80 and 132.)

By the Acts 48-49 Vic., ch. 59, and 49 Vic., ch. 10, the Canada Atlantic Railway Company were subsidised to the extent not exceeding \$134,400, for a line from Clarke's Island, in the St. Lawrence, opposite Valleyfield, through Lacolle to the International boundary, about 50 miles; also from the present Ottawa terminus to the Chaudière Falls, and under the authority of Orders in Council, dated the 17th of September, 1885, and 1st of July, 1886, contracts have been made with the company for the work in question. The date for full completion has been extended by an Order in Council of the 17th of November, 1888, to the 1st of August, 1890. Under date the 4th of December, 1888, the company applied for the inspection of the Chaudière section.

Upon due inspection, payments have been made, under Orders in Council, to the extent of \$102,355.20; the work done and so paid for comprises the whole portion between Clarke's Island and Lacolle, a distance of 43.18 miles, also the section, 3 miles, between the terminus at Ottawa and the Chaudière Falls, on the River Ottawa.

By the Act 50-51 Vic., ch. 24, the grant of a subsidy not exceeding \$180,000 was authorised for a bridge across the River St. Lawrence at Coteau Landing on the line of this railway.

The Canada Atlantic Railway Company possess powers under the Acts 35 Vic., ch. 83, and 42 Vic., ch. 57, to build this bridge, subject to the approval of the Governor General in Council and upon Proclamation in the *Canada Gazette* showing such approval. The company having submitted satisfactory plans of the proposed work and site, these were approved by Orders in Council of the 23rd February, 1887, and 26th of November, 1888, and a proclamation was published in the *Canada Gazette* of the 10th of December, 1888.

An agreement dated the 5th of December, 1888, was entered into with the company for the construction of the said bridge, a low level structure with a swing, on certain conditions, specifications and descriptions approved by an Order in Council of the 12th of that month, with a view to their obtaining the subsidy authorised by the Act 50-51 Vic., ch. 24, above mentioned.

A supplementary agreement, framed in the interests of navigation and of the public, for the operation of the swing to be built in this bridge has been approved by Orders in Council of the 29th of December, 1888, and 9th of January, 1889, and will be held as part and parcel of the main agreement for the construction of the bridge. It requires the maintenance of a signal service at a point about one mile above the bridge, and the observance of such rules and regulations as are considered necessary for the protection of traffic down the navigable channel of the river.

The main features of the bridge as definitely proposed to be built by the company are as follows: From the north shore to Giroux Island, five spans, one 154 feet clear opening; two swing spans each 160 feet clear, and two trusses each 165 feet. From Giroux Island to Round Island 11 spans, each of 186½ feet clear opening. From Round Island to Clarke's Island four spans each of 213 feet clear opening, all the above being the width of the openings at summer water level. The total length of the bridging to be executed, including the spans, is about 4,100 feet. The superstructure will, it is proposed, be of iron rivetted lattice work, the width 16 feet clear inside the end posts, and the minimum height 32 feet, the rail level being 20 feet above minimum summer water level. The estimated cost of the superstructure, including the swing, is \$470,000. The work was nearly completed by the end of the year 1889, and the sum of \$149,812 has been paid from the subsidy for this bridge up to the 31st of December, 1889.

Caraquet Railway Company.

(See Nos. 7, 41, 68 and 116.)

Under an Order in Council, dated the 6th of May, 1884, the subsidies authorized by Parliament in 1883 and 1884, for the road of this company from a point near Bathurst, on the Intercolonial Railway, to Shippegan Harbour, amounting to \$192,000, were, granted to them. An agreement was executed under date the 20th of January, 1885, for the construction of the line, the portion from Caraquet to Gloucester Junction Station, near Bathurst, to be completed by the 25th May, 1887, and the whole road by the 1st of July, 1888. By an Act, 49 Vic., ch. 10, a further subsidy of \$32,000 was authorized, covering the last 10 miles of the road; for this, however, another Act, 50-51 Vic., ch. 24 (1887), was substituted, giving

the same subsidy for 7 miles. A contract was made with the Company on the 19th February, 1887, for this subsidy. Of the total subsidies granted, namely, \$224,000, there was paid during the fiscal year \$13,950: certain, work and the supply of rolling stock, to secure the finishing of which this sum had been withheld being completed. The whole amount of the subsidies has, therefore, now been paid.

Central Railway Company of New Brunswick.

(See Nos. 40 and 143.)

By the Act of 1884, 47 Vic., chap. 8, a subsidy not exceeding \$128,000 was granted in aid of the construction of about 40 miles of the Central Railway from the head of Grand Lake to a point on the Intercolonial Railway between Sussex and St. John, N.B.

Under the authority of an Order in Council on the 5th of June, 1886, a contract was made with the Central Railway Company, on the 7th July, 1886, for a line from Salmon River at the head of Grand Lake to Norton on the Intercolonial Railway, the work to be completed by the 1st of July, 1888. Certain work had been executed, but the contract obligations had not been carried out, and no portion of the subsidy was paid. The subsidy lapsed, but was revived last session, by the Subsidy Act 52 Vic., ch. 3. In November, 1889, the Company applied for inspection of the road as a completed work, but no portion of the subsidy has been paid up to the 31st of December 1889.

By the Act 51 Vic., ch. 3, a grant as a subsidy to this company was authorized of certain used iron rails to the value of \$83,612.54, loaned to the St. Martins and Upham Railway Company, which railway has been acquired by the Central Railway Company; the sale being approved by an Order in Council of the 15th of November, 1887,) the condition of the grant being that such rails should first be replaced by new steel rails. The new steel rails have been substituted and an Order in Council of the 18th of October, 1889, has authorized the transfer of the old rails to the Company.

Chignecto Marine Transport Railway Company.

(See No. 5.)

On the 3rd of February, 1882, this company (which received incorporation the same year, by Act 45 Vic., chap. 76) made a proposal to the Government for the construction of a line of railway for the transport of ships overland across the Isthmus of Chignecto from Tidnish, on Bay Verte in the Gulf of St. Lawrence, to a point at or near the mouth of the River La Planche, in the Bay of Fundy, and by the Act 45 Vic, ch. 55, authority was given for the grant of a subsidy of \$150,000 a year for 25 years, in aid of the work.

No definite action was, however, taken until the 6th of October, 1885, when an Order in Council was passed authorizing entry into agreement with the company, subject to the approval of Parliament, and such agreement was executed on the 4th of March, 1886. Under its terms, the subsidy payable is to be \$170,602 a year for 20 years, or such portion thereof as may be required to bring the net earnings to 7 per cent. per annum on the authorized share and bond capital of the company,

\$5,500,000, and to be granted only during the satisfactory performance of the services contemplated, such services comprising the raising; transport and lowering of vessels of 1,000 tons burden, registered, with full cargo. Should the earnings exceed 7 per cent. per annum, one-half of such surplus is to be paid to the Government until repayment of the whole amount received by said company under their subsidy.

By a special Act, 49 Vic., ch. 18 (1886), this agreement was confirmed and ratified.

By a further special Act, 51 Vic., ch. 4 (1888), the time for the completion of the work, for subsidy purposes, was extended to the 1st of July, 1890, with, if required, a further extension for 24 months, but under penalty.

The company having submitted plans, the same were approved by an Order in Council of the 23rd of May, 1888, and certain amendments to them by an Order of the 7th of June, 1889. The works are making rapid progress and the rails, of 110 lbs. the yard are delivered.

Cornwallis Valley Railway Company

(See No. 128 and 168.)

By the Act 50-51 Vic., ch. 24 (1887) the grant of a subsidy to this company to the extent of \$41,600 was authorized, for 13 miles of their railway from Kentville to Kingsport,

Under an Order in Council of the 29th of March, 1888, they were admitted to contract on the 28th of May, the road to be completed by the 1st of October, 1889.

By the Act 52 Vic., ch. 3, an additional subsidy for one mile, \$3,200, was authorized, and a contract has been entered into for the building of such extra mile, to the harbour of Kingsport. The time for the completion of the whole work has been extended to the 1st of October, 1890.

Up to the 31st of December, 1889, no portion of the subsidy had been paid.

Cumberland Railway and Coal Company.

(See No. 124.)

By the Act 50-51 Vic., ch. 24 (1887) the grant to this company of a subsidy to the extent of \$44,800 was authorized, for 14 miles of their railway from a point on the Spring Hill and Parrsboro' Railway, near Spring Hill, to a point on the Oxford and New Glasgow Railway, near Oxford.

The company having applied, they were admitted to contract on the 12th of April, 1888, under an Order in Council of the 12th of March, the work to be completed by the 1st August, 1891.

No portion of the subsidy has been paid up to the close of the fiscal year, but subsequent to that date \$25,000 had been paid up to the 31st of December, 1889.

Dominion Lime Company.

(See No. 108.)

By the Act 50-51 Vic., ch. 24 (1887), the grant of a subsidy to the Dominion Lime Company was authorized, namely, for a railway of an estimated length of seven miles starting from a point on the Quebec Central Railway, in the township of Dudswell, to the Dudswell Lime Company's quarries, the amount not exceeding \$22,400.

A contract was made with the company on the 12th October, 1887, and the work is completed. The full amount of the subsidy applicable to the road, which is $4\frac{8.0}{100}$ miles long, namely, \$15,360, was paid before the close of the fiscal year.

Drummond County Railway Company.

(See Nos. 99 and 175.)

By the Railway Subsidy Act of 1887, 50-51 Vic., ch. 24, the grant of aid to an extent not exceeding \$96,000 was authorized to the Drummond County Railway Company for 30 miles of their railway from Drummondville towards Nicolet, P.Q.

Under the authority of an Order in Council of the 12th of November, 1887, which also approved of the location plans for $12\frac{1}{2}$ miles, a contract was made with the company on the 1st of December, 1887, covering a line from the South Eastern Railway at the Village of Drummondville to the South West branch of the River Nicolet, the road to be completed by the 1st of August, 1891.

On the 2nd of May, 1889, the company were admitted to contract for the balance, $17\frac{1}{2}$ miles, of the 30 miles subsidized.

By the Railway Subsidy Act of 1889, 52 Vic., ch. 3, this company were further subsidized for $4\frac{1}{2}$ miles from the end of the line already subsidized to Ball's wharf on the River St. Lawrence, \$14,400, and were admitted to contract on the 24th of December, 1889.

Up to the 30th of June, 1889, the total payments to this company amounted to \$28,872, and there has since been paid \$5,500, making the total payments up to the 31st of December 1889, \$34,372. The road is built, but is not completed according to the contract.

Elgin, Petitecodiac and Havelock Railway Company.

(See No. 144.)

By the act 51 Vic., chap. 3 (1888), certain used iron rails from the Intercolonial railway, valued at \$44,252.82, which had been loaned to the Elgin Branch Railway, now part of the line of the above named company, were changed from a loan to a subsidy for that company, on the condition that they should first be replaced on the track with new steel rails.

Such rails have been laid for a distance of 7 miles out of a total of 22 miles, and the transfer was authorized by an Order in Council of the 7th of October 1889.

(Note. A previous subsidy of \$38,400 had been earned by and paid to this company in 1885-86.)

Fredericton and St. Mary's Bridge Company

(See No. 165)

By the special Act 50-51 Vic., ch. 26 (1887), the Governor in Council was authorized to make advances (secured by a mortgage) to the Fredericton and St. Mary's Bridge Company, in aid of the construction of a railway bridge over the River St. John, such advances not to exceed 80 per cent of the expenditure as made, nor in the whole \$300,000.

Upon submission of satisfactory plans for such bridge and its approaches, an Order in Council was passed on the 25th of August under which a deed of mortgage and agreement was executed on the 12th of October, 1887, covering the works in question, and running for a term of 15 years from the date of the first advance, the interest payable being at the rate of 4 per cent. per annum. The bridge having been built and inspected, authority was given on the 14th of November, 1888, for its being opened for public traffic. On the 17th of April, 1889, an Order in Council was passed authorizing the payment of the balance of the total advance permitted by the Act, the expenditure on the work having been \$376,741.

By the Subsidy Act of last Session, 52 Vic., ch. 3, a subsidy of \$30,000 was granted to the company for the said bridge, and was paid before the close of the fiscal year.

The work connects the Fredericton Railway at Fredericton with the Northern and Western Railway at St. Mary's.

Great Eastern Railway Company.

(See Nos. 88, 114 and 174.)

By the Act 49 Vic., ch. 10, authority was given for the grant of a subsidy to an extent not exceeding \$32,000, on an estimated distance of 10 miles, towards the construction of a line from Yamaska to the River St. Francis, Que.; and the Great Eastern Railway Company having applied, and having satisfactorily shown their ability to perform the work, a contract was made with them on the 12th of October, 1886, under the authority of an Order in Council of the 9th of that month, the time for completion being fixed as the 1st of October, 1887.

The road having been completed and inspected, the whole of the subsidy due for its actual distance, 6 miles, namely, \$19,200, was paid under an Order in Council of the 27th of March, 1887.

By the Act 50-51 Vic., ch. 24, authority was given for the grant of a subsidy to the company to an extent not exceeding \$96,000 for 30 miles of their railway from the River St. Francis to the Arthabaska (Grand Trunk) Railway at St. Grégoire, and under an Order in Council an agreement was entered into with them for the work, the date being 16th March, 1888. The time for completion has been extended to the 1st of August, 1891. No portion of this subsidy had been paid up to the 31st of December, 1889.

By the Act 52 Vic. cap. 3, a subsidy was authorized to the extent of \$64,000 for a further distance of 20 miles from St. Grégoire.

Great Northern Railway Company.

(See Nos. 33, 37, 72, 79 and 154.)

By the Act 47 Vic., ch. 8 (1884), a subsidy not exceeding \$32,000 was granted to this company for the construction of a line from St. Jérôme to New Glasgow, Que.; the estimated length being 10 miles.

Under the authority of an Order in Council of the 3rd February, 1885, a contract for the work was entered into with the company on the 14th of that month, the road to be completed by the 1st of July, 1885.

The line was duly completed and inspected. Under an Order in Council of the 2nd of March, 1885, payment was made therefor, namely, for 7.84 miles, \$25,088.

By the Act 49 Vic., ch. 10 (1886), a subsidy not exceeding \$57,600 was authorized for a line from New Glasgow to Montcalm, a distance of about 18 miles. The Great Northern Railway Company having applied for it, it was granted to them by an Order in Council of the 18th July, 1887, which also approved of the location. The contract was made on the 19th of August, 1887, the road to be completed by the 1st of August, 1890. The first 10 miles have been inspected, but no payment has been made up to the 31st December, 1889.

By the Act 49 Vic., ch. 10, a subsidy not exceeding \$22,400 was granted for a line from St. Andrews to Lachute, Que., 7 miles. For this subsidy the above named company applied, but no contract was made. The same subsidy was again voted by the Act of 1889, 52 Vic., ch. 3, and authority has been given by an Order in Council of the 9th of September, 1889, for entry into contract.

Guelph Junction Railway Company.

(See No. 105.)

By the Subsidy Act of 1887, 50-51 Vic., ch. 24, authority was given for the grant of a subsidy not exceeding \$51,200 to the Guelph Junction Railway Company for 16 miles of their railway from its junction with the Canadian Pacific Railway to the town of Guelph, Ont.

Under date the 1st of October, 1887, an Order in Council authorized entry into contract, and such contract was signed on the 5th of November, the date fixed for the completion of the road being the 1st of January, 1889.

The location plans for the road, 15½ miles, having been approved, and the work inspected, payment has been made of the sum of \$46,000 under an Order in Council dated the 21st of December, 1888, leaving a balance of \$2,800. No further payment has been made up to the 31st of December, 1889.

Harvey Branch Railway Company.

(See No. 103.)

By the Subsidy Act of 1887, 50-51 Vic., ch. 24, the grant of a subsidy to the Harvey Branch Railway Company was authorized to an extent not exceeding \$9,600 in aid of a line about 3 miles in length, extending from the southern terminus of the Albert Railway to Harvey Bank.

A contract was entered into with the company on the 3rd of October, 1887, for the work. The road has been built and inspected, and payment has been made of the sum of \$5,553.57, up to close of the fiscal year. No further payment has been made up to the 31st December, 1889.

Hereford Railway Company, (formerly Hereford Branch Railway Company.)

(See Nos. 73 and 179.)

By the Act 49 Vic., ch. 10 (1886), authority was given for the grant of a subsidy to the extent of \$108,800 for a railway from Hereford to the International Railway in the township of Eaton, an estimated distance of 34 miles.

The Hereford Branch Railway Company having applied, an Order in Council of the 30th of December, 1887, authorized entry into contract with them for the work and a contract was made accordingly, dated the 31st of March, 1888. The date for completion is fixed as the 1st of August, 1890.

By the subsidy Act of 1889, 52 Vic., ch. 3, a subsidy, of \$48,000 was authorized for a line from Cookshire to Dudswell on the Quebec Central Railway, 15 miles, and the company were admitted to contract on the 3rd of August, 1889. The whole of the road has been built, and up to the close of the fiscal year the company had been paid \$63,900. Since that date further payments have been made, and up to the 31st of December, 1889, out of their total subsidies, \$156,800, the company have been paid \$155,200. The difference, \$1,600, representing some minor work remaining to be finished.

Irondale, Bancroft and Ottawa Railway Company.

(See No. 24 and 159.)

By the Act 47 Vic., ch. 8 (1884), the Irondale, Bancroft and Ottawa Railway company were subsidized, to an extent not exceeding \$160,000, for a line, about 50 miles long, to connect the Victoria Branch of the Midland Railway with the village of Bancroft.

With the sanction of an Order in Council of the 10th July, 1886, a contract was made with the company on the 19th of August, 1886, the first 10 miles to be completed by the 1st of December, 1886, and the remainder by the 1st of July, 1888.

Under the authority of an Order in Council of the 14th of February, 1887, \$15,000 has been paid. No further payment has been made up to the 31st of December, 1889, but the unpaid balance of subsidy, \$145,000, which had lapsed, was revoked by the Act 52 Vic., ch. 3 (1889).

Joggins Railway Company.

(See Nos. 76 and 100.)

By the Act 49 Vic., ch. 10 (1886), authority was given for the grant of aid to an extent not exceeding \$38,400, towards the construction of a railway, the estimated length of which is 12 miles, from a point at or near McCann Station, on the Intercolonial Railway, to the Joggins, on Cumberland Basin, N. S.

The Joggins Railway Company having applied for this subsidy, and the application being satisfactory, a contract was made with them on the 30th of November, 1886, under the authority of an Order in Council on the 5th of October, the line to be completed by the 1st of November, 1887.

A further subsidy to this company not exceeding \$4,000 having been authorized by the Act 50-51 Vic., chap. 24 (1887), towards the construction of an extension of the line, $1\frac{1}{4}$ mile long, to the wharves on Cumberland Basin, a contract was made with them for the work on the 13th of October, 1887.

Nothing was paid during the year from the company's subsidy, the amount paid remaining as last year, \$26,138.78.

Lake Erie, Essex and Detroit River Railway Company.

(See No. 133.)

By the Act 50-51 Vic., ch. 26 (1887) the grant of a subsidy to the extent of \$118,400, for 27 miles of their railway, was authorized in lieu of a subsidy granted to this company, the previous year, and on the 6th of April, 1888, they were admitted to contract for the construction of a line from Walkerville, on the Detroit River, to Cedar Creek Station, under the authority of an Order in Council of the 25th of March.

The line having been built and inspected, the company were authorized, on the 22nd of December, 1888, to open it for traffic.

Of the subsidy, the sum of \$106,500 was paid before the close of the fiscal year, the balance, \$11,900, being retained. No further payment has been made up to the 31st of December, 1889.

Lake Temiscamingue Colonization Railway Company.

(See Nos. 55, 84, 119, 122 and 169.)

By the Act 48-49 Vic., ch. 59, a subsidy was authorized in aid of the construction of a line of railway from Long Sault to the foot of Lake Temiscamingue, surmounting certain rapids on the River Ottawa. The limit of the amount was \$25,600, covering a total distance of 8 miles. A contract was entered into on the 25th of November, 1885, for the construction of 6 miles, to be completed by the 1st of January, 1887.

In conformity with an express provision to that effect in clause 2 of the Act 49, Vic., ch. 10, Letters Patent were issued under an Order in Council of the 20th of July, 1886, published in the *Canada Gazette* of the 24th, granting a charter for the construction of this railway to the "Lake Temiscamingue Colonization Railway Company."

By the Subsidy Act, 49 Vic., ch. 10, a further subsidy of \$6,000 was authorized for the building of wharves and landing stages in connection with this line. This was subsequently cancelled, and by the Act 50-51 Vic., ch. 24 (1887), the definition of portions of the road to which the preceding Acts had granted subsidies was corrected, the amount of the subsidy, however, remaining the same, namely, a total of \$31,600.

By the Act 50-51 Vic., ch. 24, the grant of a subsidy to the extent of \$33,600 was authorized for 10½ miles of this company's line from Long Sault to Lake Kipewa. The contract for this subsidy was entered into on the 27th of June, 1888.

During the fiscal year the sum of \$9,000 was paid, making a total of \$26,400, and since that date a further sum of \$26,360, making a total of \$52,760 up to the 31st of December, 1889.

Leamington and St. Clair Railway Company.

(See Nos. 56 and 123.)

By the Act 48-49 Vic., ch. 59 (1885), aid was granted to an extent not exceeding \$44,800 towards the construction of a line of railway from a point on the Canada Southern Railway near Comber, to Leamington, on Lake Erie.

By the Act 50-51 Vic., ch. 24, a further subsidy of \$6,400 was granted, making the total subsidy \$51,200.

Under authority of an Order in Council of the 13th of April, 1886, a contract for this work was made with the Leamington and St. Clair Railway Company on the 3rd of May, 1886, the road to be completed by the 1st of August, 1889. After inspection of the road and under Order in Council the sum of \$19,200 was paid during the fiscal year, completing the total subsidy of \$51,200 authorized.

Minudie Railway Company.

(See No. 121.)

By the Act 50-51 Vic., ch. 24 (1887), authority was given for the grant of a subsidy to the extent of \$17,600 to the above company for 5½ miles of their railway from its junction with the Joggins Railway, near the River Hebert Railway Bridge, to the village of Minudie, Nova Scotia.

Under authority of an Order in Council of the 10th of February, a contract, dated the 26th of March, 1888, has been made with the company for this work, which was to be completed by the 1st of March, 1889.

Up to the 31st of December, 1889, no portion of the subsidy has been paid.

Montreal and Champlain Junction Railway Company.

(See Nos. 51, 125 and 136.)

By the Act 48-49 Vic., ch. 59, a subsidy was authorized to be granted to this company for a line from Brosseau's to Dundee, not exceeding \$30,000. The work was completed and the subsidy was paid in the year 1885-86.

By the Act 50-51 Vic., ch. 24, a further subsidy not exceeding \$64,000 was authorized to be granted to this company, and the contract was signed on the 25th of January, 1888, for a line from Fort Covington to Massena Springs.

By the Act 51 Vic., ch. 3, a further subsidy of \$9,600 was authorized for 3 miles additional, making a total of \$73,600. Of this amount \$36,700 was paid during the fiscal year and subsequently the sum of \$5,400, making the total payments under this contract \$58,500 up to the 31st of December, 1889.

Montreal and Lake Maskinongé Railway Company.

(See No. 74.)

By the Act 49 Vic., ch. 10 (1886), the grant of a subsidy of \$32,000 for a railway from St. Félix to Lake Maskinongé, P. Q., was authorized, and application being made by the Montreal and Lake Maskinongé Railway Company, an Order in Council of the 1st of October, 1887, accepted them as contractors, and an agreement was entered into accordingly on the 29th of September, covering the distance between St. Félix and St. Gabriel de Brandon, near Lake Maskinongé, the road to be completed by the 1st of December, 1888. The location plans for the distance, 12 $\frac{3}{4}$ miles, were approved by an Order in Council of the 23rd of June, 1888. During the fiscal year payment has been made of \$19,700 and, subsequently, the further sum of \$10,800, making the total payments up to the 31st of December, 1889, \$20,500.

Montreal and Sorel Railway Company.

(See No 47.)

By the Act 48-49 Vic., ch. 59, a subsidy not exceeding \$72,000 was authorized to be granted to this company for a line from St. Lambert to Sorel. Under an Order in Council of the 2nd October, 1885, a contract was made with the company on the 14th, and under the authority of Orders in Council, the last dated the 10th of November, 1886, payments have been made, amounting in all to \$69,922, the road, 44.67 miles long, having been completed, with the exception of a small quantity of work, to secure the finishing of which \$1,550 was retained. No further payment has been made, and the said balance lapsed on the 1st of August, 1889.

Montreal and Western Railway Company.

(See No. 78.)

By the Subsidy Act of 1886, 49 Vic., ch. 10, authority was given for the grant of a subsidy, in lieu of previous subsidies, to the Montreal and Western Railway Company for 70 miles of their railway from St. Jérôme, northwesterly towards Le Désert, P.Q., the amount being \$5,161 per mile, not exceeding in the whole, \$361,270.

Under authorization of an Order in Council dated the 4th of June, 1888, a contract was made with the company for the work on the 6th, the date for completion being fixed as the 1st of August, 1890. The location plans for this distance have been approved. No portion of the subsidy has been paid up to the 31st of December, 1889.

Napanee, Tamworth and Quebec Railway Company.

(See Nos. 13, 27, 57, 94, 107 and 166.)

In 1883 Parliament authorized a subsidy of \$89,600 to this company, covering their road from Napanee to Tamworth.

A contract, dated 31st December, 1883, was entered into with the company for this work, and upon completion, inspection, and approval of the road, this subsidy was all paid under Orders in Council, the last dated the 28th of July, 1884.

In the Session of that year Parliament authorized the grant of a further subsidy, not exceeding \$3,200 a mile or a total of \$70,400, for an extension of this company's road from Tamworth to Bogart and Bridgewater. In 1885, however, in substitution for this subsidy, Parliament authorized the grant to the company, of a subsidy of \$70,000 for a line "from Tamworth towards Bogart and Bridgewater, 16 miles." This, again, was cancelled by the Act 49 Vic., ch. 10 (1886), a subsidy of \$70,000 being granted to the company for 18 miles of their railway from Tamworth to Tweed.

By the Act 50-51 Vic., ch. 24 (1887), a further subsidy to this company, not exceeding \$12,800, was authorized for 4 miles of their road to Tweed.

Under date the 25th of July, 1888, an Order in Council authorized entry into contract, and approved the location plans from Tamworth to Tweed, 20 miles. The contract was signed on the 31st of July, 1888, covering both subsidies. The road is to be completed by the 1st of August, 1890.

By the Act 52 Vic., ch. 3 (1889), the grant of a further subsidy to this company was authorized for 7 miles of their railway from Yarker to Harrow-smith, and also a grant to a company for three miles of railway from Harrow-smith to Sydenham, the total being \$32,000. Under date the 4th of September, 1889, the company were admitted to contract for 3 miles, to be completed by the 1st of August, 1893, and under date the 26th of December for the distance of $6\frac{3}{4}$ miles from a point near Yarker to or near to Harrow-smith, to be completed by the 1st of August, 1891.

The total subsidies available under the contracts covering the distance between Tamworth and Tweed, Yarker, Harrow-smith and Sydenham amount to \$114,800. Of this, no portion had been paid up to the close of the fiscal year, but subsequent to that date \$75,400 has been paid up to the 31st of December, 1889. Under date the 30th of November, 1889, the company were allowed to open for traffic between Tamworth and Tweed, and between Yarker and Harrow-smith.

Northern and Pacific Junction Railway Company—Gravenhurst to Callander.

(See Nos. 1, 16 and 160.)

For the purpose of affording to the Province of Ontario the advantage of direct railway communication with the North-West, it was necessary that a road should be built connecting the Canadian Pacific Railway with the existing railways of Ontario, and such a line was subsidized by the Acts of 1882 and 1883, to the extent of \$12,000 a mile, for a distance of 110 miles, or a total of \$1,320,000. It extends, southwards, from the Canadian Pacific Railway at Nipissing Junction, east of Lake Nipissing, to the village of Gravenhurst, a distance of $111\frac{1}{4}$ miles, there connecting with the railway system of Ontario. Under the authority of an Order in Council, dated the 10th of April, 1884, a contract was entered into on the 12th of April, 1884, with the Northern and Pacific Junction Railway Company (formerly the Northern, North-Western and Sault Ste. Marie Railway Company), for the construction of this line, the same to be completed by the 1st of May, 1886.

Connection was made from north to south in January, 1886, a through train running on the 27th of that month.

By an Order in Council of the 3rd of May, 1886, the time for completion was extended to the 1st of August, 1886.

Up to the 31st of December, 1886, the total payments aggregated \$1,284,400, leaving the sum of \$35,600 to cover certain incomplete work. This balance lapsed, but was revoted in 1889 (52 Vic., ch. 3,) being, however, set down as \$35,000 only. The whole of the work being completed, under an Order in Council of the 6th of July 1889, this amount was paid to the company, leaving \$600 due.

Northern and Western Railway Company.

(See Nos. 11, 29, 50 and 61.)

In 1883 Parliament authorized the grant of a subsidy to this company of \$102,400, towards the construction of 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's, near Demphy village, N.B. This action was suggested to the House, in view of an application made for aid for a line extending from the Intercolonial Railway at the crossing of the Miramichi River. *via* Boiestown and the Nashwaak Valley to Gibson, on the River St. John, opposite Fredericton. In 1884, no work having meantime been commenced, Parliament voted money for the construction, by the Government, of the portion of this distance, extending from Derby Station, on the Intercolonial Railway, to Indiantown, and authorized the grant to this company of a subsidy of \$128,000 in aid of their railway from Fredericton to Miramichi, "instead of the subsidy proposed in 1883."

The contract for the construction of this subsidized line, from Fredericton to the Miramichi, 40 miles in length, was signed on the 24th of December, 1884, an Order in Council of the 16th of that month having given approval to the draft of such contract. The date fixed for completion was the 1st of July, 1888.

The location for the whole distance, 40 miles, having been approved of by Orders in Council, and the road having been duly completed and inspected, the whole of the subsidy, \$128,000, was paid to the company, before the close of the fiscal year 1885-86.

In 1885, a subsidy in favour of this company was authorized to the extent of \$19,200 for a continuance of their line to Boiestown, and under the authority of an Order in Council of the 6th of November, 1885, a contract was made with the company for the work on the 26th of that month. The location was approved by an Order in Council of the 27th. The line, six miles in length, was to be completed by the 1st of November, 1886. The line being completed, an Order in Council was passed on the 13th of July, 1886, under which payment of \$18,200 was made; the balance, \$1,000, being retained to cover the widening of certain cuttings.

Parliament also, in 1885, authorized the grant of a subsidy to the extent of \$140,800 in aid of the construction of a line of railway from Indiantown, *via* the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown.

The Northern and Western Railway Company having applied for the work, they were accepted, and a contract was made with them on the 26th of November,

1885, as authorized by an Order in Council of the 7th of that month; the location for the whole distance, about 50 miles, being approved of by an Order of the 27th. The line was to be completed by the 1st of August, 1888.

By the Subsidy Act, 49 Vic., ch. 10 (1886) a further grant of \$32,000 to this company was authorized for ten miles of their railway, made up of the portion intervening between the present termini of their already subsidized line and of the two miles extending down to deep water at Chatham.

For this subsidy, a contract was made with the company on the 14th of August, 1886, covering the intervening portion of line only, and omitting the two miles deep-water extension. Under date the 12th of August, 1887, they entered into an agreement covering the two miles in question, the amount of subsidy applicable being \$6,400.

By the 31st of December, 1887, the whole road between Gibson, opposite Fredericton, and Indiantown was completed and in operation, the actual distance being $95\frac{1}{2}$ miles. The total subsidy provided for this distance was \$313,600. The amount found to be actually applicable was \$305,600, and the whole has been paid after due inspection and on Orders in Council, the last dated the 31st of December, 1887.

Under date the 29th of November, 1888, an Order in Council passed authorizing payment of the sum of \$6,300 out of the \$6,400 of subsidy for the deep water extension at Chatham (\$100 being retained for the completion of certain work), and this amount has been paid. Since the 30th of June, 1889, the said sum of \$100 has been paid, completing the payment of all subsidies granted to this company, \$312,000.

The portion connecting Indiantown with the Intercolonial Railway, fourteen miles, having been built by the Government as a branch for its main road, there is now direct communication between Fredericton and the Intercolonial Railway at Derby, the distance being about $109\frac{1}{2}$ miles.

Nova Scotia Central Railway Company.

(See Nos. 129 and 135.)

By the subsidy Act of 1887, 50-51 Vic., ch. 24, the Nova Scotia Central Railway Company were subsidized for 34 miles of their railway, to an extent not exceeding \$108,800. Under an Order in Council of the 16th of September, 1887, the company were admitted to contract on the 17th of October, 1887, the work to be executed being a line of railway from Lunenburg, on the east coast of Nova Scotia, westward, to a point in the district of New Germany, together with a spur, about $\frac{3}{4}$ mile long, to Bridgewater Railway Wharf, the whole to be completed by the 31st of December, 1889.

By the Act 51 Vic., chap. 3 (1888) the grant of a further subsidy not exceeding \$147,200 was authorized, for 46 miles of the company's railway, and under an Order in Council of the 9th October, 1888, a contract, dated the 15th of October, 1888, was executed, covering a line of railway $39\frac{1}{2}$ miles, starting from a point $33\frac{1}{2}$ miles from Lunenburg, and running to Middleton on the Windsor and Annapolis Railway; the work is to be completed by the 31st of December, 1890.

No portion of these subsidies had been paid by the close of the fiscal year, but since that date, after due inspection and an Order in Council, payments have been made to the extent, up to the 31st of December, 1889, of \$181,300, covering the distance from Lunenburg to Middleton and the spur to Bridgewater, a total of 73½ miles.

Ontario and Pacific Railway Company.

(See Nos. 31, 115 and 150.)

By the Act 47 Vic., chap. 8, (1884,) the grant of a subsidy to the Ontario and Pacific Railway Company was authorized, namely, to the extent of \$262,400, on an estimated distance of 82 miles, for a line from Cornwall to Perth, and on the 27th of July, 1886, a contract was made with the company, under the authority of an Order in Council of the first day of that month, for the construction of such line, *viâ* Newington, Chrysler, Manotick and Franktown, the road to be completed by the 1st July, 1888. This subsidy lapsed on the 1st of July, 1888.

By the Act 50-51 Vic., chap. 24, a further subsidy of \$19,200 for a further distance of 6 miles was granted.

No portion of these subsidies has been paid up to the 31st of December, 1889.

By the Act 52 Vic., chap. 3, 1889, a subsidy not exceeding \$172,400 was authorized to this Company for a line from Cornwall to Ottawa.

Ontario and Quebec Railway Company.

(See West Ontario Pacific Railway Company.)

Ottawa and Gatineau Valley Railway Company.

(See Nos. 8, 26, 58 and 151.)

By the Act 48-49 Vic., chap. 59 (1885) the grant of a subsidy to this company was authorized (in lieu of subsidies granted in previous years), namely, for a line of railway from Hull station towards the village of Le Desert, 62 miles, the amount being \$320,000. This subsidy having lapsed, it was re-voted last session by the Act 52 Vic., chap. 3.

Under authority of an Order in Council of the 10th of July, 1889, a contract with the company for the work in question, 62 miles, was signed on the 19th of August, the date for completion being fixed as the 1st of August, 1893.

The location plans of the first 20 miles were approved by an Order in Council of the 11th of July, 1888.

Up to the 31st of December, 1889, no portion of the subsidy had been paid.

Pontiac and Renfrew Railway Company.

(See No. 163.)

By the Act 52 Vic., chap. 3. (1889) the grant of a subsidy to the above company of \$19,200 was authorized for six miles of their railway and under date the 2nd of August, 1889, they were admitted to contract, the line to be from the Bristol iron mines to the Pontiac Pacific Junction Railway, in Onslow, the work to be completed by the 1st of October, 1889. No payment was made during the fiscal year, but subsequently, up to the 31st of December, 1889, there was paid \$9,800.

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Pontiac Pacific Junction Railway Company.

(See Nos. 25 and 138.)

This line was subsidized by Parliament in 1884, to the extent of \$3,200 a mile, not exceeding \$272,000.

Under authority of an Order in Council, dated the 12th of December, 1884, a contract, dated the 22nd of that month, was made with this company for the building of the line subsidized, namely, from Aylmer, Que., to Pembroke, crossing the River Ottawa at a point "not east of Lapasse," the first twenty-seven miles to be completed by the 1st September, 1885 (extended to 15th of December by Order in Council of the 13th of August, 1885), the second twenty-seven miles by the 1st of July, 1886, and the whole road, estimated at 85 miles west of Alymer, by the 1st of July, 1887.

Up to the close of the fiscal year, 1887-88, a total of \$174,828, for a distance of 71 miles from Aylmer, had been paid out of the full subsidy, \$272,000.

The road is open for public traffic from Aylmer to Coulonge, 59 miles.

By the Act 51 Vic., ch. 3 (1888), a subsidy to this company of \$31,500 was authorized for the bridging of the River Ottawa at Culbute; also a subsidy of \$9,600 for 3 miles of their railway from a point 3 miles east of Pembroke to Pembroke, provided that the entire work subsidized on this railway be completed within four years from the 22nd of May, 1888. No contract has been entered into for the work contemplated by this Act up to the 31st of December, 1889.

By the 5th clause of the Art. 52, Vic., ch 3, it was specially provided that the several subsidies in aid of this railway should be extended to the 22nd of May, 1892.

Quebec Central Railway Company.

(See Nos. 22 and 142.)

This company was subsidized in 1884, to the extent of \$211,200, in aid of the construction of sixty-six miles of their railway, from Beauce Junction to the International Boundary.

Under the authority of an Order in Council, dated the 2nd of August, 1884, a contract was made with the company on that date for the construction of a line from Beauce Junction on their trunk line, thence up the valley of the River Chaudière to the frontier, the line to be completed by the 2nd of February, 1888.

The location of the first 23 miles was approved of by an Order in Council of the 8th of May, 1885. The amount of the subsidy paid up to the end of the fiscal year 1885-86, under an Order in Council of the 14th of August, 1885, was \$60,342, covering 15½ miles of road inspected, starting from Beauce Junction. No further payment has been made up to the 31st of December, 1889.

In lieu of the balance of this subsidy, which lapsed on the 1st of July, 1888, authority has been given by the Act 51 Vic., ch. 3 (1888), for the grant of a subsidy to this company of \$21,191.54 a year for 20 years, equivalent to a cash grant of \$288,000, for a line of railway from St. Francis Station to a point on the Atlantic and North-West Railway, near Moose River, 90 miles. No contract has yet been made for this work.

Quebec and Lake St. John Railway Company.

(See Nos. 2, 14, 49, 82, 126, 140 and 177.)

By the Subsidy Act of 1882, a subsidy of \$384,000 was granted for a line from St. Raymond to Lake St. John. By the Act of 1883, the Quebec and Lake St. John Railway Company, engaged in the work of constructing this line, were permitted to receive a further subsidy of \$80,000. By the Act of 1885 a subsidy of \$96,000 was authorized for a line extending from the point of their junction with the North Shore Railway (4 miles from Quebec) up to St. Raymond (36 miles from Quebec), conditionally upon the construction of their line to a point 50 miles north of St. Raymond, and by the Act of 1886 a subsidy was authorized, not exceeding \$186,295, for the portion, 95 miles, extending from the point 50 miles north of St. Raymond to Lake St. John.

By the Act 50-51 Vic., ch. 24 (1887), an additional subsidy not exceeding \$28,800 was authorized for a distance of 9 miles, the distance which previous subsidies granted were short of covering from the city of Quebec to Lake St. John. By this Act, authority was given for payment up to the 23rd of June, 1888 (under the usual conditions) of balances available from the subsidies granted in 1882 and 1883. The aggregate of the subsidies granted to this company for the whole distance from Quebec to Lake St. John is \$775,095, the number of miles subsidized being 186.

An agreement was duly entered into on the 4th of September, 1883, in respect of the two subsidies first named, under which this line was to be completed by the 25th of May, 1887, the portion up to Lake Edward to be completed by the 31st of December, 1885, and on the 10th of February, 1886, an agreement was signed covering the third subsidy, that, namely, of 1885. For the subsidies granted in 1886 and 1887, no further contracts are required, these subsidies being applicable to works embraced in the previous contracts.

The road is in operation up to Roberval, on Lake St. John, 190 miles from Quebec.

By the Act 51 Vic., ch. 3, a subsidy to the extent of \$96,000, previously granted to the Saguenay and Lake St. John Railway Company, for 30 miles of their railway from Lake St. John towards Chicoutimi was transferred to this company, and under authority of an Order in Council of the 17th of November, 1888, a contract was made with them on the 5th of December for this work, which starts from Chambord Junction near Lake St. John on their main line; the work to be completed by the 1st of August, 1890. The location for these 30 miles has been approved by an Order in Council of the 17th of November, 1888.

By the Act 52 Vic., ch. 3 (1889), a further subsidy of \$64,000 was granted for an additional 20 miles, making the total subsidy for this branch \$160,000. •

During the fiscal year there has been paid the sum of \$19,911 making the total payments up to the 30th of June, 1889, \$709,915. Since that date, up to the 31st of December, 1889, there has been paid the further sum of \$38,440, making the total payments, for both main line and branch, \$748,355.

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"Short Line."

In previous reports, and pending definite conclusions as to work and negotiations then in progress, a scheme of some magnitude and importance to the country whereby a line of railway more direct than the existing one should be constructed to connect the harbours of the Atlantic seaboard with the railway systems to the west of the St. Lawrence has been dealt with under the title "The Short Line."

Now, however, parts of the scheme have been undertaken as Government work, and the remainder under a company. The project comprises the following features:—

1. A line from the River St. Lawrence at Caughnawaga, running *via* Sherbrooke across the State of Maine, to Harvey, Fredericton, Salisbury on the Intercolonial Railway and so to Moncton—connecting on the way with the roads leading to St. Andrews and St. John, N.B. This work has been constructed by the Atlantic and North-West Railway Company (Canadian Pacific Railway Company) up to Harvey, whence it connects with St. John, and the Government have caused a fresh survey to be made between Harvey and Salisbury.

2. A line from Oxford to New Glasgow, avoiding a long *détour* and joining the Eastern Extension Railway at New Glasgow. This work has been undertaken by the Government.

3. A line from a point on the Island of Cape Breton opposite the Canso terminus of the Eastern Extension on the mainland to Sydney and North Sydney. This is being constructed as a Government work.

Information with regard to these works will be found in the present report under their respective headings.

South Norfolk Railway Company.

(See No. 109.)

By the Act 50–51 Vic., ch. 24, authority was given for the grant of a subsidy of \$54,400 to this company, for 17 miles of their railway from Port Rowan to the town of Simcoe.

Under an Order in Council of the 11th August, 1888, the company were admitted to contract on the 23rd, the date for completion being the 1st July, 1889.

The road having been completed and inspected, the whole of the subsidy, \$54,400, has been paid under an Order in Council of the 29th December, 1888. The road is open for traffic, being operated by the Grand-Trunk Railway Company.

St. Catharines and Niagara Central Railway Company.

(See No. 96 and 176.)

By the Act 50–51 Vic., ch. 24 (1887), the grant of a subsidy to the extent of \$38,400 to the above company was authorized for 12 miles of their railway from St. Catharines to the bridge over the River Niagara.

The company were admitted to contract on the 5th March, 1888, under an Order in Council of the 12th April, the location being approved by an Order of the same date.

On the 20th of December 1888, the road having been built and inspected, the company were permitted to open it for traffic.

During the fiscal year there was paid the sum of \$26,640, the sum of \$11,760 being withheld pending completion of certain works in connection with the contract. No further payment was made up to the 31st of December, 1889.

By the Act 52 Vic., chap. 3 (1889), a subsidy for 20 miles of this road was authorized, and on the 31st of December, 1889, the company applied to be admitted to contract, the extension being from their present terminus at St. Catharines towards Hamilton.

Oshawa Railway and Navigation Company.

(See No. 112)

By the Act 50-51 Vic., ch. 24 (1887), the grant of a subsidy to the extent of \$22,400 was authorized for seven miles of this company's railway extending from Port Oshawa towards Raglan; they were admitted to contract on the 20th July, 1889. The time for completion of the work has been extended to the 1st of August, 1891. No portion of the subsidy had been paid up to the 31st of December 1889.

Port Arthur, Duluth and Western Railway Company.

(Formerly the "Thunder Bay Colonization Railway Company.")

(See No. 139)

This company was originally incorporated, its name being afterwards changed by Statute of Ontario, as the "Thunder Bay Colonization Railway Company." It was declared to be a body corporate under its present name by the Dominion Act 51 Vic., ch. 84, which authorized it to receive all grants voted to the previous company.

By the Subsidy Act 51 Vic., ch. 3 (1888), the grant of a subsidy to the extent of \$271,200 was authorized in favour of the above company, for $84\frac{3}{4}$ miles of their railway from Port Arthur towards Gun Flint Lake, a point on the International Boundary line, this being in place of subsidies previously granted for the construction of a railway from Murillo Station to Crooked Lake.

A contract was entered into with the company on the 24th of December, 1889. The location of the entire line has been approved, but no portion of the subsidy had been paid up to the 31st of December, 1889.

Shuswap and Okanagan Railway Company.

(See No. 167)

This company was incorporated by the Act 49 Vic., ch. 82 (1886), for the construction of a line of railway from a point on the Canadian Pacific Railway, at Sicamous Narrows B.C., running up the left bank of the Shuswap River to a point near the north end of Lake Okanagan.

By 51 Vic., ch. 88 (1888) this Act was amended, and the company were allowed two years to commence and five to complete their main line.

By the Subsidy Act of 1889, a subsidy to the extent of \$163,200 was authorized for the said railway, the estimated distance being 51 miles.

The contract has not, up to the 31st of December, 1889, been signed but the company have sent in plans showing the location of the line for the whole distance.

Quebec, Montmorency and Charlevoix Railway Company.

(See No. 164.)

By the Subsidy Act 52 Vic., ch. 3 (1889) the grant of a subsidy to the extent of \$96,000 to the above company was authorized for 30 miles of their railway from the east bank of the River St. Charles to or near to Cape Tourmente, P.Q.

A contract was entered into with the company on the 14th of November 1889 for this work, starting from Hadleyville. The date for completion is the 1st of October 1890.

No portion of the subsidy had been paid up to the 31st of December 1889.

Vaudreuil and Prescott Railway Company.

(See No. 97.)

By the Railway Subsidy Act of 1887, 50-51 Victoria, Chapter 24, the grant of a subsidy to the above company was authorized for 30 miles of their railway from Vaudreuil towards Hawkesbury, the extent of such subsidy being \$96,000.

A contract was made with the company on the 11th of February, 1889, for the distance named, starting from the Grand Trunk Railway at Vaudreuil. The date for completion is fixed as the 1st of August, 1891. No portion of the subsidy had been paid up to the 1st of December, 1889.

Woodstock and Centreville Railway Company.

(See No. 131.)

By the Act 50-51 Victoria, Chapter 24, (1887), the grant of a subsidy to the extent of \$64,000 was authorized for a railway from Woodstock towards Centreville, 20 miles.

The above railway company having applied and being approved, a contract was made with them on the 6th of May, 1889, for the distance named, the line to start from Upper Woodstock Station, on the New Brunswick Railway, the work to be completed by the 1st October, 1890. Up to the 31st of December, 1889, no portion of the subsidy had been paid.

St. Clair Frontier Tunnel Company.

(See No. 162.)

In the year 1884, a company, "The St. Clair Frontier Tunnel Company," was incorporated by the Dominion Act, 47 Vic., ch. 82, for the purpose of building a tunnel for railway passage under the River St. Clair, from a point in or near the town of Sarnia, Ontario, to the city of Port Huron, Michigan, U.S., the Act providing that the plans of the tunnel and its works should be approved by the Governor in Council prior to commencement.

Plans of this work were submitted by the company and approved by an Order in Council dated the 24th of November, 1886, which also approved of the site. Certain changes were subsequently found necessary, and amended plans were approved by an Order in Council dated the 7th of October, 1889.

The length of the actual tunnel will be 5,950 feet, of which 2,310 feet will be under the river. For the centre portion of this distance 1,708 feet will, practically, be on the level, the ascent from the centre on either side being 1 in 50. The approaches comprise an open cutting on the east side of 3,200 feet, and on the west side of 2,560. The tunnel, cylindrical in form, will have a diameter of 20 feet in the clear. It will be lined with cast iron. The greatest depth of water over the top of the work will be $40\frac{1}{2}$ feet, and the minimum, 15 feet. The work, when completed, will give connection between the Grand Trunk Railway and the Chicago and Grand Trunk Railway.

By the Subsidy Act, 52 Vic., ch. 3 (1889), a subsidy to the extent of 15 per cent. of the value of the work, but not exceeding \$375,000, was authorized.

Under authority of an Order in Council dated the 2nd of October, 1889, a contract was entered into with the company on the 30th of that month for the work in question, which is to be completed by the 1st of August, 1893.

Pending inspection, no portion of the subsidy has been paid over up to the 31st December, 1889, but the works are being carried on steadily, and in that month the company applied for payment on account of work done, showing a total cash expenditure up to the 31st of October, 1889, of over \$667,000.

St. John Valley and Rivière du Loup Railway Company.

(See Nos. 90 and 118.)

By the Act 49 Vic., chap. 10 (1886), a subsidy of \$70,400 was authorized for 22 miles of railway from Fredericton to Prince William, New Brunswick, and by the Act 50-51 Vic., chap. 24, a subsidy of \$70,400 was authorized in favour of the St. John Valley and Rivière du Loup Railway Company for 22 miles of railway from Prince William towards Woodstock.

The company having applied for both subsidies, they were admitted to contract on the 26th June, 1888, under an Order in Council of the 21st May, the time for completion being fixed as the 31st July, 1890. This covers both subsidies, aggregating \$140,800. The location plans were approved by an Order in Council of the 23rd May, 1888.

Up to the 31st December, 1889, no portion of the subsidy had been paid.

Stewiacke Valley and Lansdowne Railway Company.

(See No. 87.)

By the Act 49 Vic., chap. 10 (1886), a subsidy was authorized for a railway from a point on the Intercolonial Railway through the Stewiacke Valley, affording communication with the Iron Mines. Spring Side, Upper Stewiacke and Musquodoboit settlements, 25 miles, the extent of aid not exceeding \$80,000. The
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Stewiacke Valley and Lansdowne Railway Company having applied for this subsidy, a contract was made with them on the 17th of December, 1886, the line to be completed by the 1st of December, 1889. The grading and bridging are in progress, but up to the 31st of December, 1889, no portion of the subsidy had been paid.

St. Lawrence, Lower Laurentian and Saguenay Railway Company.

(See Nos. 59, 117.)

By the Act 48-49 Vic., chap. 59 (1885), a subsidy of \$217,600 was granted for a line of railway from the Grand Piles, on the River St. Maurice, Que., to a point of junction with the Lake St. John Railway (being in lieu of a subsidy of the previous year).

By the Act 50-51 Vic., chap. 24, this subsidy was repeated in favour of the company named below.

The St. Lawrence, Lower Laurentian and Saguenay Railway Company having applied for this subsidy, and being approved, a contract was entered into with them on the 20th of February, 1886, under authority of an Order in Council of the 6th of that month, which also approved of the location plans, the said location being subsequently amended under an Order in Council of the 25th of August, 1887.

Up to the 30th of June, 1888, there had been paid to the company the sum of \$92,813. covering a distance of twenty-two and a half miles.

The time for completion has been extended to the 1st of August, 1891, No further payment has been made up to the 31st of December, 1889.

Témiscouata Railway Company—Rivière du Loup to Edmundston.

(See Nos. 3, 62, 127 and 141.)

Towards the construction of a line from Rivière du Loup or Rivière Ouelle, or from some point between them, to Edmundston, Parliament, in 1882, voted a subsidy of \$240,000, and by the Act 48-49 Vic., ch. 58, a further subsidy, not exceeding \$258,000, was voted for the same work, making a total subsidy of \$498,000.

Under express provisions of this Act a charter was granted by Orders in Council of the 3rd and 6th of October, 1885, to certain persons constituting "The Témiscouata Railway Company," their object being to build the said road, and such charter, being published in the *Canada Gazette* of the 10th of that month, has force and effect as if an Act of Parliament. This charter was subsequently confirmed and amended by the special Act 50-51 Vic., ch. 71, 1887. Under the said charter the company have power to construct a road from the Intercolonial Railway at Rivière du Loup to Edmundston. On the 21st of June, 1886, a contract was duly entered into with the company for the work subsidized, the whole to be completed by the 1st of August, 1889. The location of the road, eighty-and-a-half miles, *via* Lake Témiscouata and the River Madawaska has been approved of by an Order in Council of the 30th of September, 1886. During the fiscal year ended on the 30th June, 1889, payments have been made on Orders in Council and after due inspection, amounting to \$163,216, making the total payments up to that date

\$412,900. no further payments have been made up to the 31st December, 1889. On the 22nd of November, 1888, the company were permitted to open the road for traffic.

By the Act 51 Vic., ch. 3 (1888) a subsidy of \$100,000 was granted to this company for twenty miles of their branch railway from Edmundston towards the River St. Francis, in lieu of a subsidy granted the previous year.

The company having applied to be admitted to contract authority was given for such contract by an Order in Council passed on the 31st of December, 1888, which also approved of the location, and the company were admitted to contract on the 22nd of January, 1889. No portion of this subsidy has been paid, up to the 31st of December, 1889.

Tobique Valley Railway Company.

(See No. 130.)

By the Act 50-51 Vic., ch. 24 (1887) authority was given for the grant of a subsidy to the extent of \$89,600 for fourteen miles of the railway of the above company from Perth Centre Station on the New Brunswick Railway towards Plaister Rock Island, in lieu of a subsidy previously granted. A contract was made with this company for the work on the 4th of September, 1888. The date for completion has been extended to the 1st of August, 1890.

The grading is in progress, but no portion of the subsidy has been paid up to the 31st of December, 1889.

Thousand Islands Railway Company.

(See No. 182.)

By the subsidy Act 52 Vic., ch. 3 (1889) the grant of a subsidy to the extent of \$54,400 to the above company for four miles of their railway from a point near the River St. Lawrence in the village of Gananoque to Gananoque Junction on the Grand Trunk Railway, and for thirteen miles of their railway from Gananoque Junction to a point of junction with the Brockville, Westport and Sault Ste. Marie Railway was authorized.

A contract was made with the company for this work on the 24th of October, 1889, the four-mile section to be built by the 1st of July, 1890, and the thirteen-mile section by the 1st of August, 1893. Under an Order in Council of the 10th of December, 1889, \$10,400 has been paid for the section, three-and-a-quarter miles, from Gananoque to the Grand Trunk Railway, completed.

Western Counties Railway Company.

By the Act 50-51 Vic., ch. 25 (1887), assented to on the 23rd of June, 1887, confirmation was given to an agreement made by the Government with the Western Counties Railway Company, on the 31st of January, 1887, contingently on such confirmation, the agreement itself being thereby, in some respects, modified, as expressed in a subsidiary agreement. Under the provisions of the said Act and agreements, covenants have been entered into which may be summarized as follows :—

The company agreed to withdraw a suit pending against the Crown in respect of the Windsor Branch Railway, releasing the Government from all claims, and also releasing to the Government all right and title to the branch. They also undertook to build and complete the railway between Annapolis and Digby, N. S., and to complete, equip and put in first-class order the whole of the line from Yarmouth to Annapolis, also to settle all liens on their property, and their indebtedness. In order to the fulfilment of the above, they undertook to deposit with the Government the total proceeds of the sale of their debentures, &c., the issue of which was limited to \$4,200,000. The Government, on its side, in consideration of these premises, undertook to pay to the company the sum of \$500,000, this amount to be credited to the company and added to the proceeds of the sale of their debentures, which proceeds the Government agree to hold for the purpose, the whole to be applied under certificate of the Government Chief Engineer and Order in Council, to the payment of interest on the debentures, &c., to be issued, to the building and completion of the railway above mentioned, and to the satisfaction of the company's existing obligations; the balance, if any, to be paid to the company. The dates to which the company were bound, as modified by terms of the Act, were as follows:

Work to be commenced by the 13th of July, 1887, and the railway between Annapolis and Digby to be completed by the 12th of September, 1888, the company to complete to the satisfaction of the Government by the 12th of September, 1887, all arrangements for the settlement of its indebtedness. Provision was made also for the completion of the line between Annapolis and Digby, by the Government, at its option, from the funds in its hands, in the event of failure on the part of the company to make commencement of work, to progress with the same, or to satisfy the Government as to the arrangement of the settlement of its indebtedness by the dates so fixed. The Company did not make deposit of money; nor did they take any practical steps to carry out the work contemplated. Under these circumstances, and in view of representations urging that the Government should itself undertake the work, a survey was made of the country between Digby and Annapolis, under instructions given in October, 1888.

By the special Act 52 Vic., ch 8 (1889) authority was given for the construction of this link of railway out of the appropriation of \$500,000 granted by the Act 50-51 Vic., ch. 25, and this work was accordingly taken in hand by the Department of Railways, and is being carried out as is shown elsewhere in the present report under that heading.

West Ontario Pacific Railway Company.

(See No. 66.)

By the Act 49 Vic., chap. 10, 1886, the grant of a subsidy not exceeding \$3,200 a mile, nor in the whole \$256,000, was authorized in aid of the construction of a railway from Ingersoll, *viâ* London, to Chatham, Ont., the estimated distance being 80 miles.

Application being made by the West Ontario Pacific Railway Company for the said subsidy, qualified by a request for permission to construct a road from Woodstock to London, in place of from Ingersoll, and it appearing that in view of the

greater distance of the line proposed by them from any other existing railway, it would be of more service to the country than the route actually subsidized, they were permitted, by an Order in Council of the 8th of September, 1886, to enter into contract for the road suggested between Woodstock and London, 27 miles, subject, however, to approval by Parliament; this conditional contract was signed on the 2nd of November, 1886, the road to be completed by the 1st of November, 1887.

The company, however, have actually constructed a portion of their railway, the location of which has been duly approved, from London eastwards to a point near Ingersoll, 19 miles, from which connection may be made with both Ingersoll and Woodstock. After inspection they were paid under an Order in Council of the 1st of September, 1887, the sum of \$60,000, this being the amount of the subsidy applicable to the length built, less the sum of \$800 withheld to cover work remaining to be done. This work being completed, the said balance was paid under an Order in Council of the 5th of February, 1889, making the total payment \$60,800.

In the Session of 1887 an Act, 50-51 Vic., chap. 62, was passed, authorizing the lease to the Ontario and Quebec Railway Company of part of the line of the West Ontario Pacific Railway Company under construction, from the line of the Ontario and Quebec Railway near Woodstock, *via* London to the River St. Clair, and this lease has been approved by an Order in Council, dated the 15th of October, 1887.

Under an Order in Council dated the 25th of August, 1888, an agreement dated the 4th of September, 1888, has been made with the Ontario and Quebec Railway Company (Canadian Pacific Railway) direct for the construction of the line between London and Chatham by the 1st of August, 1890, the estimated distance for subsidy purposes being 65 miles; no portion of the subsidy had been paid up to the 31st of December, 1889.

LAND SUBSIDIES.

The following companies have been aided by subsidies in land, duly authorized by Parliament and granted by the Department of the Interior:—

They are enumerated here because the engineering details have been dealt with by this Department, the certificate of whose officer has been required prior to handing over to the company concerned any part of the subsidy.

Alberta and Athabaska Railway Company.

(Name changed by 52 Vic., ch. 65 to the "North Western Railway Company of Canada.")

Brandon and South-Western Railway Company.

By an Order in Council dated the 23rd of November, 1889, but subject to the approval of Parliament, and contingently on their obtaining an Act of incorporation from the Dominion, this company has been granted a subsidy of 6,400 acres per mile in aid of a railway from a point in Township 1, in either Range 23 or 24, west of the 1st Principal Meridian, to Deloraine, Manitoba, about 17 miles. The

company are at present incorporated under a Provincial Act. This railway is to be commenced by the 1st of May, 1890, and completed and running by the 1st of May, 1891.

Canadian Pacific Railway Company.

By an Order in Council of the 18th of May 1889, but subject to approval by Parliament, a grant of lands to the extent of 6,400 acres per mile in favour of the Canadian Pacific Railway Company was authorized in aid of the construction of a branch from a point at or near Brandon on their main line south-westerly to or near Township 3, Range 27. West of the 1st Principal Meridian, and thence westerly a total distance of 100 miles, also for a line 25 miles running from such point in Township 3 easterly to Deloraine, the western terminus of the existing line of the Manitoba South-Western Colonization Railway, making in all 125 miles subsidized, and the total grant, 800,000. The whole to be completed by the 31st of December, 1890. A further order of the 18th of June, 1889, authorized the conveyance of the subsidy on completion of each 20 mile section.

Under date the 16th of August, 1889, the Company filed plans showing the location of this branch from Kemnay, a station on their main line, 8 miles west of Brandon, to Melita in Township 3, Range 26, West.

By an Order in Council of the 14th of June, 1889, but also subject to approval by Parliament, the grant of a subsidy to the Canadian Pacific Railway Company of land to the extent of 6,400 acres per mile was authorized for a branch starting from a point on the above mentioned south-westerly branch and running to Glenboro, the present terminus of the northern limb of the Manitoba North-Western Colonization Company, the length of railway so subsidized being stated to be about 60 miles, the subsidy to be conveyed on the completion of each 20 mile section. The date for completion was by this order fixed as the 31st of December, 1890.

Great North-West Central Railway Company.

(See No. 191.)

The inception of the scheme for the construction of a line of railway to extend from Brandon on the Canadian Pacific Railway to Battleford in the Provisional District of Saskatchewan, a distance of about 450 miles, is due to the North-West Central Railway Company (formerly the Souris and Rocky Mountain Railway Company) and under an Order in Council of the 29th of July, 1885, the privilege of purchasing land at the rate of \$1.06 per acre, to the extent of 6,400 acres per mile, previously accorded them, was converted into a free grant of such land (subject to a charge of 10 cents per acre for survey), the grant being contingent on the due completion of their work in stated sections.

This concession did not result in the construction of any section of the road, and difficulties arising, and other applications being put forward for the work, the Act 49 Vic., chap. 11 (1886), granting aid to the extent of 6,400 acres per mile for the same, was made applicable either to the company named or to such other company as might undertake the construction of the road. The Great North-West Central Railway Company was incorporated by an Order in Council of

the 22nd of July, 1886, in conformity with the provisions of the Act; a second Order of the 3rd of August amending such charter, and the whole being confirmed and ratified by the Act 51 Vic., ch. 85 (1888.) A section of such charter giving running powers to the Canadian Pacific Railway was repealed by 52 Vic., ch. 67 (1889).

By an order in Council, also of the 22nd July, 1886, the subsidy referred to was granted to this Company; the contract itself being signed on the 12th of September, 1887. Under an Order in Council of the 1st of July, 1889, the contract time for completion has been extended as follows:—

By the 1st of December, 1889,	50 miles.
do 30th do 1890,	100 do
do do do 1891,	150 do
do do do 1892,	150 do
<hr/>	
450 miles.	

A further Order in Council of the 16th of November, 1889, has extended to the 31st of May, 1890, the time for the completion of the first 50 miles.

The location plans have been approved up to the 50th mile, and the Company have asked for inspection up to that point.

Lac Seul Railway Company.

Under date the 13th of November, 1889, there has been granted to the above company by an Order in Council, subject to the approval of Parliament, a subsidy in land to the extent of 6,400 acres per mile, towards the construction of a railway from a point near Shelley Station, on the Canadian Pacific Railway, to a point near Mud Lake, on the Winnipeg River, about 18 miles; the road to be completed by the 1st of November, 1891.

Manitoba and North-Western Railway Company.

(See Nos. 188 and 190.)

By the Act 48-49 Vic., ch. 60, authority was given for the grant of aid for a line from Portage la Prairie to the crossing of the south branch of the River Saskatchewan, 20 miles from Prince Albert, about 430 miles, 6,400 acres per mile or 2,527,000 acres.

A grant was made to the company by Order in Council of the 4th October, 1884, cancelling previous Orders. The time for completion was fixed by Order in Council of the 6th of May, 1885, as at the rate of fifty miles a year.

The location and grades having been duly approved, an inspection made of the Company's road showed that up to the 1st December, 1885, they had built and equipped 131 miles of road. An Order in Council of 2nd April, 1886, authorized conveyance of the land grant for this distance, namely, 838,400 acres.

By the Act 49 Vic., chap. 11, 1886, authority was given for the grant of aid for a branch of this railway, from a point on the main line at or near Todburn, to the River Assiniboine, near Shellmouth, about 26 miles, 6,400 acres per mile.

A grant was made to the company by Order in Council of the 24th of May, 1886, completion to be by the 31st December, 1886. Under Orders in Council of

the 10th and 21st September, 1886, the line was permitted to start from Binscarth, the Order first named approving the location to Russell, up to which point the road has been built. This branch, $11\frac{1}{2}$ miles long, is completed.

Under date the 22nd of June, 1889, an Order in Council was passed authorizing conveyance of the land grant for a further distance of 80 miles, namely 512,000, making the total number of miles on which the subsidy has been actually given over to the Company 211, and the number of acres, 1,350,400.

On the 14th of December, 1889, the company submitted for approval plans of location for the distance between the 206th to the 256th mile from Portage la Prairie.

At the present date, the 31st of December, 1889, the main line, is in operation for traffic purposes from Portage la Prairie to Saltcoats, 206 miles.

Manitoba South-Western Colonisation Railway Company.

(Leased to the Canadian Pacific Railway Company.)

(See No. 187.)

By 48-49 Vic., cap. 60 (1885), authority was given for the grant of aid for a line from Winnipeg to Whitewater Lake, about 150 miles, 6,400 acres per mile.

The charter of the company, granted by Act 42 Vic., ch. 66 (1879), empowered them to build a line from Winnipeg to Rock Lake, near the west boundary of the Province, the line to be completed in five years, namely, by the 15th May, 1884.

By the Act 43 Vic., ch. 53, 1880, they were permitted to extend the line up to the Souris coal fields.

By the Act 47 Vic., ch. 73, 1884, the company were allowed to lease their line to the Canadian Pacific Railway, the time for the completion of the railway being extended three years beyond the period fixed by their charter, namely, to the 15th of May, 1887.

By an Order in Council of the 4th of October, 1884, the company were subsidized to the extent of 6,400 acres per mile for the whole distance, about 152 miles, from Winnipeg to Whitewater Lake, equal to 972,800 acres, the line for this distance to be completed by the 1st of October, 1885. Location has been approved as follows:—

By an Order in Council of the 3rd November, 1881,—from Aikins Street, Winnipeg, to Section 18, Township 7, Range 4 W., about 52 miles. This is to a point about 4 miles south from what is now known as Elm Creek.

By an Order in Council of the 1st April, 1885—from Section 29, Township 8, Range 4, the point now known as Elm Creek, running west on a tangent to Section 31, Township 7, Range 9. This is the northern branch to the westward.

By an Order in Council of the 10th of September, 1885,—from Section 29, Township 8, Range 4, passing through Carman and Manitou and the south shore of White Lake, thence to the western boundary of Manitoba between Ranges 29 and 30. This is the southern branch.

An Order in Council of the 6th April, 1885, modified the grant of the Order in Council of the 4th October, 1884, so as to make it applicable to a change in the location of the road, and to the following sections :—

	Miles.
1. From Township 7, Range 4 (the portion from Winnipeg to Township 7, Range 6, about fifty miles, being already completed to Manitou.....	110
2. From Manitou to Whitewater Lake.....	
3. From Township 8, Range 4, to Township 8, Range 9.....	20
	<u>130</u>

The Order also apportioned the 972,800 acres equally amongst these 130 miles=7,483·84 acres per mile.

An Order in Council of the 11th September, 1885, extended the time for completion to the 6th April, 1886.

An Order in Council of the 5th April, 1886, after report by the Chief Engineer of Railways as to inspection, showing completion of 100 miles, authorized the conveyance of 748,384 acres to the Manitoba South-Western Railway Company.

By an Order in Council of 15th November, 1886, it was decided to apply to certain further extensions completed, namely, on the South Branch, from Boisevain west 21 miles; on the North Branch, from Holland west, 20 miles, the reserve for Section No. 1, made under the Order of the 6th April, 1885. The remainder was to be kept as a subsidy for said Section No. 1, from Township 7, Range 4, to Manitou, the construction of which was deferred, the Canadian Pacific Railway Company, the lessees of the road, having already communication with Manitou from Winnipeg by their southern line. In August' 1885, however, the company fyled plans of the extension from Elm Creek to Carman, part of the said section No. 1.

By an Order in Council of the 6th March, 1887, the location of the northern of the two limbs has been approved for a total distance of 60 miles from Elm Creek to Section 10, Township 7, Range 14. Of this, the first 30 miles was for a location previously approved, but now amended.

After further inspection and report by the Government Chief Engineer, showing the railway fit for traffic for a further total distance of 60 miles, an Order in Council was passed on the 19th of March, 1887, authorizing conveyance of the lands representing the subsidy for this distance. At the present date, the 31st December, 1889, the line is in operation from Winnipeg to Glenboro' (northern limb) 105 miles; also on the southern limb as far as Deloraine, a point 100 miles west from Manitou, and 202 miles from Winnipeg.

It should be observed that the Canadian Pacific Railway, the lessees of this road, have obtained by Orders in Council, subject to approve by Parliament, subsidies in land for branches which are practically extensions of both the northern line from Glenboro and the southern line from Deloraine, these subsidies are dealt with under the heading "Canadian Pacific Railway Company."

Medicine Hat Railway and Coal Company.

(See No. 195.)

By the Act 50-51 Vic., chap. 23 (1887) authority was given for the grant to the above company of Dominion lands to the extent of 6,400 acres per mile for a railway from a point at or near Medicine Hat, on the line of the Canadian Pacific Railway to the coal field in or near Townships Nos. 12 and 13, Range 6, west of the 4th Principal Meridian, a distance of about 8 miles.

By an Order in Council of the 6th of July, 1887, the grant was made to the company accordingly; it being provided that the road should be completed and in operation by the 31st of December, 1888.

By an Order in Council of the 24th of January, 1889, approval was given to a draft of a formal contract with the company, and an extension of time to the 2nd of June, 1890, was granted for completion of the road. The contract was signed on the 14th of February, 1889.

North-Western Coal and Navigation Company.

(See No. 186.)

By 48-49 Vic., ch. 60 (1885), authority was given for the grant of aid for a line from Medicine Hat to the coal banks on the Belly River, about 110 miles, 3,800 acres per mile. This was amended by 50-51 Vic., ch. 22—the extent of land being increased to 3,840 acres per mile.

By an Order in Council of the 16th of March, 1885, approval was given to the location of the company's line, and on inspection, in October, 1885, of the road from Dunmore Station, on the Canadian Pacific Railway, to Lethbridge, 109 miles, an Order in Council of the 19th of October, accepted the road as completed. An Order in Council dated the 18th of January 1889, stated that the company were entitled to a total subsidy of 418,560 acres, of which they had already received 347,413 acres, and authorized the conveyance of the further grant of 48,498 acres, making a total of 395,911 acres.

It should be observed that by the land subsidy act of 1889, a grant was made under the name of this company. An Order in Council of the 14th of October 1889, corrected the grant as being intended for the "Alberta Railway and Coal Company."

North Western Railway Company of Canada.

(Formerly the Alberta and Athabaska Railway Company.)

(See No. 139 and 198.)

By an Order in Council, dated the 21st of May, 1887, a grant of land was made subject to the approval of Parliament, to the Alberta and Athabaska Railway Company (the name of which was changed, as above; by the Act 52 Vic., ch. 65) from some point on the Bow River or Canadian Pacific Railway at or between Calgary and Crow Foot Creek, running northerly to a point on the River Athabaska, and crossing the North Saskatchewan at a point near the town plot of Edmonton, a distance of 300 miles, the subsidy being at the rate of 6,400 acres per mile. The

first 50 miles, commencing at the southern terminus, were to be completed by the 20th of July, 1888; 100 miles in each of the two years following, and the whole road by the 20th of July, 1891.

By the Act 50-51 Vic., ch. 23, the above grant was confirmed.

By the Land Subsidy Act of 1889 (52 Vic., ch. 4) a subsidy was authorized in favour of the North Western Railway Company of Canada to the extent of 10,000 acres per mile, for a railway from Calgary on the Canadian Pacific Railway, northerly to a point on the North Saskatchewan River, at or near Edmonton, a distance of about 210 miles, also to the extent of 10,000 acres per mile for a railway from Calgary southerly to Lethbridge a distance of about 120 miles.

Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company.

(See No. 189 and 194.)

By Act 48-49 Vic., ch., 60, authority was given for the grant of aid for a line from a point near Regina to the navigable waters of Long Lake, 6,400 acres per mile.

On the 13th December, 1884, an Order in Council was passed granting to the company the above subsidy.

The location of the road from Regina to the navigable waters of Long Lake, a distance of about 23 miles, was approved by an Order in Council of the 25th of September, 1886.

On inspection of the road, made in May, 1886, it was found completed and in running order for a distance of 20·10 miles.

By the Act 50-51 Vic., ch. 23, authority was given for the grant to this company of a subsidy of 6,400 acres per mile for an extension of their line from a point near the northern terminus of the completed portion of the line near Long Lake to a point near the elbow of the North Saskatchewan River, with branches to Prince Albert and Battleford, about 325 miles.

On the 20th of June, 1887, an Order in Council was passed granting this subsidy; the company to construct and have running the first 50 miles of the distance by the 20th of July, 1888, the portion up to the crossing of the South Saskatchewan within the following year, and the whole road by the 25th of May, 1891. This Order was subsequently cancelled.

By the special Act 52 Vic., ch. 5 (1889), authority was given as follows:—

“In order to enable the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company to complete their railway from Regina to some point on the South Saskatchewan River, at or near Saskatoon, and thence northward to Prince Albert, the Governor in Council may enter into a contract with such company for the transport of men, supplies, materials and mails, for twenty years, and may pay for such services, during the said term, eighty thousand dollars per annum, in manner following, that is to say:—the sum of fifty thousand dollars to be paid annually on the construction of the railway to a point at or near Saskatoon, such payment to be computed from the date of the railway to such point; and the remaining thirty thousand dollars annually on the extension of the railway to

Prince Albert, such payment to be computed from the date of such last mentioned completion: Provided, that if the second portion of the said railway is not built and operated to Prince Albert within two years after the completion of the railway to the South Saskatchewan as aforesaid, the payment of fifty thousand dollars shall cease until the whole railway is finished to Prince Albert."

By an Order in Council of the 26th of June, 1889, approval was given to a draft of an agreement with the company in respect of transport service on completion of the road to Saskatoon. This agreement was signed on the 5th of August, 1889. By it the company were bound to complete the road to a point on the River Saskatchewan, near Saskatoon, by the 1st of November, 1890, and to Prince Albert within two years afterwards.

Under date the 29th of November, 1889, a further Order in Council was passed approving of a definite form of contract and specification for the work contemplated by the Land Subsidy Act, 50-51 Vic., ch. 23 (1887).

By this contract the dates for completion are fixed as follows:—

By the 1st of November, 1890—

	Miles.
From a point about 19 miles from Regina on the road already built between Regina and Long Lake, up to Saskatoon on the South Saskatchewan.....	130

By the 1st of November, 1892—

Thence to the elbow of the North Saskatchewan, about.....	25
A branch to Prince Albert, about.....	85
And also a branch to Battleford, about.....	85
	<u>325</u>

This contract has not been signed up to the 31st of December, 1889.

Red Deer Valley Railway and Coal Company.

(See No. 197.)

This company was incorporated by the Act 52 Vic., ch. 52, for the construction of a railway from a point near Calgary, N.W.T., to a point on the Red Deer River in Township 32, Range 21, west of the 4th Principal Meridian, the route being defined; also from a point at or near Cheadle Station, on the Canadian Pacific Railway, northerly to a point of junction with the line from Calgary, in or near Township 26, Range 25, west of the 4th Principal Meridian, with other branches indicated.

On the 28th of November, 1888, an Order in Council authorized the grant, subject to approval by Parliament, of a subsidy in land to the extent of 6,400 acres per mile for the line from Cheadle Station to a point in or near Township 29, Range 23, west of the 4th Meridian, a distance of about 55 miles. This was confirmed by the Land Subsidy Act, 52 Vic., ch. 4 (1889).

Winnipeg and Hudson's Bay Railway and Steamship Company.

(See No. 185.)

By 47 Vic., cap. 25, clause 7 (1884), authority was given for the grant of aid for a line from some point on the Canadian Pacific Railway to Hudson Bay, viz., for each mile in Manitoba, 6,400 acres, and in the North-West Territories, 12,800 acres.

In the year 1880, by Act 43 Vic., ch. 59, there was incorporated the "Winnipeg and Hudson's Bay Railway and Steamship Company," with powers for the construction of a line from Winnipeg to or near Port Nelson, Hudson Bay.

In 1884, this Act was amended (by chapter 70), and the company were authorized to commence their line either from Winnipeg or from some point between Selkirk and Portage la Prairie, extending to Port Nelson and Churchill or some other point on Hudson Bay; also to construct a branch from any point on their main line to the Canadian Pacific Railway, west of Lake Winnipegosis, construction to be carried on at the rate of at least 50 miles a year.

By the same Act, a previous Act authorizing the amalgamation of this company with the Nelson Valley Railway and Transportation Company was repealed, and authorization was given for the winding up of the company last named and the transfer to the Winnipeg and Hudson's Bay Company of all its property and interests.

By an Act passed in 1886 (49 Vic., ch. 73) the date for completion was fixed as the 2nd of June, 1890.

By an Order in Council of the 11th of May, 1885, all previous orders in this connection were cancelled, and there was granted to the Winnipeg and Hudson's Bay Railway and Steamship Company a subsidy in land, as follows:—

		Acres.
Authorised by Act 47 Vic., c. 25; assented to 19th April, 1884.	Division A.—From the Canadian Pacific Railway to the northern boundary of Manitoba—estimated distance, 225 miles.....	1,440,000
	Division B.—From the boundary to the terminus near the mouth of the Nelson River, Hudson Bay—estimated distance, 425 miles.....	5,440,000
	Division C.—The Branch, from a point on the main line, near the northern extremity of Lake Winnipeg, to intersection with the Manitoba and North-Western Railway—estimated distance not to exceed 250 miles (grant to be subject to approval by Parliament).....	<u>1,600,000</u>

The time for completion was fixed by this Order as 50 miles on division A or B by the 19th of April, 1887, and 50 miles a year thereafter until completion of main line; but if the company do not complete their main line by 11th of May, 1890, they will forfeit their right to a grant for their branch line, which must itself be completed by the 11th May, 1893.

In April, 1888, the Chief Engineer of Government Railways reported showing that 40 miles of road were completed with the exception of certain station buildings, &c.

By an Order in Council, dated the 16th of May, 1889, the date for the completion of the first 50 miles has been extended to the 19th of April, 1890. No portion of the grant has been conveyed up to the 31st of December, 1889.

Wood Mountain and Qu'Appelle Railway Company.

(See No. 192.)

By the Act 49 Vic., ch. 11, (1886), the grant of aid was authorized for a railway from a point in Township 4, Range 30, west of the 2nd Meridian, passing through Fort Qu'Appelle to the Manitoba and North-Western Railway, about 240 miles, 6,400 acres per mile.

A grant was made to the company by Order in Council of the 24th May, 1886, the portion between Fort Qu'Appelle and the Canadian Pacific Railway to be completed by the 1st November, 1887, and 50 miles a year thereafter.

This Order was amended by an Order of the 7th of July, 1887, the company being allowed one year from the 1st of January, 1887, for the completion of the first 50-mile section (after completion by the 1st of November, 1887, of the portion between the Canadian Pacific Railway and Fort Qu'Appelle), the rate of construction to be 50 miles each year, subsequently, until completion of the road.

By a further amending Order in Council of the 22nd of November, 1887, the Company were granted an extension of time for the completion of the portion between Fort Qu'Appelle and the Canadian Pacific Railway, namely, up to the 31st of July, 1888; 100 miles of the road to be completed and in operation by the 31st of December, 1888, as required by the preceding Order.

By the special Act 52 Vic., ch. 66 (1889) the section of a previous Act giving this company power to construct a railway on the route above indicated was repealed, and they were empowered to construct a line from a point on the International Boundary line, at or near Range 16, west of the 2nd Principal Meridian, in a northerly direction by Qu'Appelle station to Fort Qu'Appelle, thence in a north-easterly direction to a point at or near the north-west corner of Lake Winnipegosis; the portion between the point of intersection with the Canadian Pacific Railway and Fort Qu'Appelle to be completed by the 1st of August, 1890, and the whole road by the 16th of April, 1896.

By the Land Subsidy Act of 1889, 52 Vic., ch. 4, the subsidy provided by the Act 49 Vic., ch. 11, was made available for this new line, and the Governor in Council, was authorized to grant it. No further action has been taken.

NORTHUMBERLAND STRAITS TUNNEL SURVEY.

A scheme having been submitted to the Government for the construction of a subway under the Straits of Northumberland to connect the railway systems of New Brunswick and Prince Edward Island, it was considered advisable, before arriving at a decision on a matter of such importance, that the Government should obtain from its own engineers information as to the feasibility of the plan. An Order in Council was passed on the 24th of August, 1886, under which a limited expendi-
1x [1889]

ture was authorized in order that subaqueous borings might be taken, covering the distance between Cape Traverse, on the Island, and Cape Tormentine, on the mainland, a distance of eight miles.

The engineers employed succeeded in making borings at a quarter of a mile for the first three miles, starting from Cape Traverse, and at each half mile for the balance. On the first $5\frac{1}{2}$ miles the boring tool passed through sand and gravel until brick clay was reached. From the $5\frac{1}{2}$ to the $6\frac{1}{4}$, through sand and hard grey sand to brick clay. From the $6\frac{1}{4}$ to the 8th mile, namely, to the shore line of the main land, through mud, sand and red clay to rock. The deepest water is 96 feet at $4\frac{1}{2}$ miles from the Cape Traverse wharf, and at the $6\frac{1}{2}$ mile a rocky reef occurs, covered by 9 feet of water and about 10 feet of sand. With this exception the bottom is very uniform and satisfactory.

THE RAILWAY COMMITTEE OF THE PRIVY COUNCIL.

The Minister of Railways being Chairman of the Railway Committee of the Honourable the Privy Council, on which certain extensive duties are imposed by the Railway Act of 1888, it seems proper that a brief record should here be made of the several cases heard before this committee during the year, and the decisions arrived at.

The following cases have been before the Railway Committee of the Privy Council, from January to December, 1889:—

Crossing, at rail level, by the Portage Extension of the Red River Valley Railway of the Pembina Mountain Branch of the Canadian Pacific Railway.—Approved.

Crossing, at rail level, by the Portage Extension of the Red River Valley Railway of the Manitoba South-Western Colonization Railway.—Approved.

Crossing, at rail level, by the Portage Extension of the Red River Valley Railway of the Canadian Pacific Railway at Portage la Prairie.—Approved.

Diversion of public road between lots 30 and 31, 8th concession, Lancaster, at crossing by Ontario and Quebec Railway.—Approved.

Crossing by the Ontario and Quebec Railway of street railway, Richmond street, London, and of streets and highways on first 10-mile section of line westward.—Approved.

Railway bridge across Assiniboine River at Winnipeg.—Approved.

Crossing, at rail level, by the Northern Pacific and Manitoba Railway of the Pembina Mountain Branch of the Canadian Pacific Railway near Morris.—Approved.

Overhead crossing by the Ontario and Quebec Railway of the Grand Trunk Railway (London, Huron and Bruce) near Hyde Park.—Approved.

Crossing, at rail level, by the Ontario and Quebec Railway of the Sarnia Branch of the Grand Trunk Railway.—Approved.

Branch line of the Grand Trunk Railway at Chatham.—Not sanctioned on line of location proposed.

Crossing, at rail level, by the Ontario and Quebec Railway of the Grand Trunk Railway near Komoka.—Approved.

Connection between Great Western and Northern and North-Western divisions of the Grand Trunk Railway at Stoney Creek, near Hamilton.—Not sanctioned as a branch line.

Red River Valley Railway Bridge across the Assiniboine River near Portage la Prairie.—Approved.

Crossing, at rail level, by the Beauharnois Junction Railway of the Canada Atlantic Railway, near Valleyfield.—Approved.

Crossing, at rail level, by the Ontario and Quebec Railway of the Canada Southern Railway (Mooretown Branch) Township of Elfrid.—Approved.

Branch of Canada Atlantic Railway through Rochesterville, Mount Sherwood, etc.—Sanctioned.

Crossing, at rail level, by the Ontario and Quebec Railway of the Lake Erie, Essex and Detroit River Railway, near Windsor.—Approved.

Bridge of Ontario and Quebec Railway across the River Thames, near Chatham.—Approved.

Crossing, at rail level, by the Ontario and Quebec Railway of the Grand Trunk Railway in the Township of Raleigh.—Approved.

Overhead highway crossing of Ontario and Quebec Railway by road allowance between 2nd and 3rd concessions, Township of London.—A diagonal overhead crossing approved.

Crossing, at rail level, by the Lake Erie, Essex and Detroit River Railway of the Leamington and St. Clair Railway at Leamington.—Approved.

Interlocking Switch and Signals at level crossing of the Canada Southern and the Erie and Huron Railways.—Insertion authorized.

Change in location of Don Branch of the Ontario and Quebec Railway at Toronto.—Case pending.

Expropriation of additional land on Water Front, Toronto, by the Ontario and Quebec Railway Company.—Case pending.

Change in location of Central Ontario Railway near Glen Miller.—Approved.

Junction of the Northern Pacific and Manitoba Railway with the Manitoba and North-Western Railway at Portage la Prairie.—Approved.

Level crossing by Ontario and Quebec Railway of Mr. E. Lebœuf's tramway between Townships of Tilbury West and Rochester.—Approved.

Street crossings of Grand Trunk and Canadian Pacific Railways, Toronto.—Matter pending.

Crossings at rail level by the Port Arthur, Duluth and Western Railway of the Canadian Pacific Railway at Port Arthur and Fort William.—Approved.

Branch line of the Midland Railway at Campbellford.—Case pending.

Change of location of the Midland Railway at Campbellford.—Approved.

Junction of the Winnipeg Transfer Railway with the Canadian Pacific Railway at Winnipeg.—Case pending.

Landing Wharf of Chignecto Marine Transport Railway on La Planche River.—Approved.

Drawbridge of the Canadian Pacific Railway across the Frazer River, near St. Mary's Mission, B. C.—Case pending.

Crossings by the Ontario and Pacific Railway of streets at Windsor.—Approved.

Crossing at rail level by the Vaudreuil and Prescott Railway of the Canadian Pacific Railway at Vaudreuil.—Approved.

Branch line of the Erie and Huron Railway to Rondeau Harbour Pier.—Approved.

Branch line of the Canada Southern Railway in the Township of Dawn.—Case pending.

Packing between rails on the Grand Trunk and affiliated lines.—Authorized to be left out during winter months until further orders.

Fencing on the Erie and Huron Railway.—Matter pending.

LIST OF SUBSIDIZED LINES.

By the Acts of Parliament below specified, authority has been placed in the hands of the Governor in Council to grant, upon certain conditions, aid towards the construction of various lines of railway throughout the Dominion, as follows, namely :—

By the Act 45 Vic., Cap. 14, (1882.) *Assented to 17th May, 1882* :—

1. For a railway from Gravenhurst to Callander, both in the Province of Ontario, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole..... \$660,000
(NOTE.—*Further subsidized by 46 Vic., ch. 25.*)

2. For a Railway from St. Raymond to Lake St. John, both in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 384,000
(NOTE.—*Further subsidized by 46 Vic., ch. 25 ; 48-49 Vic., ch. 59 ; 49 Vic., ch. 10, 50-51 Vic., ch. 24 ; 51 Vic., ch. 3 and 52 Vic., ch. 3.*)

3. For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouëlle, in the Province of Quebec, or between them, to Edmundston, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 240,000
(NOTE.—*Further subsidized by 48-49 Vic., ch. 58.*)

4. For a railway from Oxford to New Glasgow, both in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 224,000
(NOTE.—*Further subsidized as part of a line to Sydney or Louisburg by 47 Vic., ch. 8.*)

The said subsidies to be granted to such companies as shall be approved by the Governor in Council, as having established, to his satisfaction, their ability to complete the said railways respectively, within a reasonable time, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council on the report of the Minister of Railways and Canals, and specified in an agreement to be made by the company with the Government, and which the Government is empowered to make, and to be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, such proportion to be established by the report of the said Minister; provided always, that the granting of such bonuses or subsidies, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting therewith, as the Governor in Council may determine.

By the special Act 45 Vic., cap. 55 (1882.) (*Assented to 17th May, 1882*):—

5. A subsidy authorized in favour of "The Chignecto Marine Transport Railway Company," provided that they construct and thereafter maintain and operate a ship railway, to be approved by the Government, across the Isthmus of Chignecto from the Gulf of St. Lawrence to the Bay of Fundy, per year, for twenty-five years..... \$150,000
(NOTE.—*Amended by the special Act 49 Vic., ch. 18.*)

By the Act 46 Vic., cap. 25 (1883.) (*Assented to 25th May, 1883*):—

6. To the Baie des Chaleurs Railway Company, for 100 miles of their railway, from Matapedia, on the Intercolonial Railway, to Paspébiac, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 320,000
(NOTE.—*See also 49 Vic., ch. 17, as to additional vote, also 52 Vic., ch. 3.*)
7. To the Caraquet Railway Company, for 36 miles of their railway from a point near Bathurst to Caraquet, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 115,200
NOTE.—*Further subsidized by 47 Vic., ch. 8; and 50-51 Vic., ch. 24.*)
8. To the Gatineau Valley Railway Company, for the first 50 mile section of their railway, from Hull Station, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 160,000
(NOTE.—*Cancelled by 48-49 Vic., ch. 59, further subsidized by 52 Vic., ch. 3.*)
9. To the Great American and European Short Line Railway Company, for 80 miles of their railway from Canso to Louisburg or Sydney, in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 256,000

(NOTE.—*This was amended by the Act 47 Vic., ch. 8, sec. 2, the words "To the Great American and European Short Line Railway Company" being struck out, and*
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the word "the" being inserted for the word "their," and the words and figures "for 80 miles of" being omitted. The line was further subsidized by 47 Vic., ch. 8, as part of a line from Oxford Station to Sydney or Louisbourg; finally authorized as a Government work by Act 49 Vic., ch. 14.)

- 10.** To the International Railway Company, for 49 miles of their railway from Sherbrooke, in the Province of Quebec, to the International boundary line, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 156,800

In connection with the extension of this road through Maine to connect with New Brunswick, at or near Vanceborough or south of that point.

- 11.** To the Northern and Western Railway Company, for 32 miles of their railway, from the Intercolonial Railway, near the Miramichi, to Moran's near Demphy Village, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 102,400

(NOTE.—Cancelled by 47 Vic., ch. 8, which authorized another subsidy: also, 48-49 Vic., ch. 59, and 49 Vic., ch. 10.)

- 12.** To the Montreal and Western Railway Company, for the first 50 mile section of their railway, out of St. Jérôme, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000

(NOTE.—Cancelled by 49 Vic., ch. 10, which authorized another subsidy.)

- 13.** To the Napanee, Tamworth and Quebec Railway Company, for 28 miles of their railway, from Napanee to Tamworth, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 89,600

- 14.** To the Quebec and Lake St. John Railway Company, for 25 miles of their railway, from St. Raymond to Lake St. John, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 80,000

In addition to the subsidy granted by the Act forty-fifth Victoria, chapter fourteen.

(NOTE.—Further subsidized by the Act 48-49 Vic., ch. 59; 49 Vic., ch. 10, 50-51 Vic., ch. 24, and 52 Vic., ch. 3.)

- 15.** For a railway from the Intercolonial Railway at Petitcodiac to Havelock Corner, in the Province of New Brunswick, 12 miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400

- 16.** For a railway from Gravenhurst to Callander, 110 miles, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole..... 660,000

In addition to the subsidy granted by the Act forth-fifth Victoria, chapter fourteen.

"The nine subsidies first mentioned to be granted to the companies herein-before named respectively; and the two subsidies last mentioned to be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to complete the said railways, respectively; and all the eleven lines above mentioned, and also the lines of railway in respect

of which it is provided by the Act forty-fifth Victoria, chapter fourteen, that subsidies may be granted, shall be commenced within two years from the first day of July next, and completed within a reasonable time, not to exceed four years from and after the passing of this Act, to be fixed by Order in Council, and according to descriptions and specifications to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement, to be made by each company with the Government, and which the Government is empowered to make; and all the said subsidies authorized by this Act, respectively, to be paid out of the Consolidated Revenue Fund of Canada by instalments, on the completion of each section of not less than ten miles of railway, proportionate to the value of the portion so completed in comparison with the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies shall be subject to such conditions for securing such running powers or traffic arrangements and other rights as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine."

By the special Act 46 Vic., cap. 26 (1883.) (*Assented to 25th May, 1883*):—

- 17.** An advance authorized in favour of the "St. John Bridge and Railway Extension Company," to enable them to build a railway bridge across the River St. John, N. B., with railway connection with the Intercolonial, such advance to be secured by a mortgage on their entire property, not to exceed 80 per cent. of the expenditure on the work, nor a total sum of.....\$ 500,000

By the Act 47 Vic., cap. 8 (1884.) (*Assented to 19th April, 1884*):—

- 18.** To the Government of the Province of Quebec, in consideration of their having constructed the railway from Quebec to Ottawa, forming a connecting line between the Atlantic and Pacific coasts *via* the Intercolonial and Canadian Pacific Railways, and being as such a work of national and not merely provincial utility, a subsidy not exceeding \$6,000 per mile for the portion between Quebec and Montreal, 150 miles, nor exceeding in the whole..... 954,000
- 19.** And for the portion between Montreal and Ottawa, 120 miles, \$12,000 per mile, nor exceeding in the whole.....1,440,000
- 20.** For the construction of a line of railway connecting Montreal with the harbours of St. John and Halifax by the shortest and best practicable route, after the report of competent engineers, a subsidy not exceeding \$170,000 per annum, for fifteen years, or a guarantee of a like sum for a like period as interest on bonds of the company undertaking the work, per year, for fifteen years..... 170,000

(NOTE.—*Further subsidized by the Act 48-49 Vic., ch. 58, sec. 1, sub-sec. 2.*)

- 21.** For the construction of a line of railway from Oxford Station, on the Intercolonial Railway, to Sydney or Louisburg, a subsidy not exceeding \$30,000 per annum for fifteen years, or a guarantee of a like sum for a like period as interest on the bonds of the company

undertaking the work, in addition to the subsidies previously granted, and also a lease or transfer to such company of the Eastern Extension Railway, from New Glasgow to Canso, with its present equipment, per year, for 15 years..... 30,000

NOTE.—*Authorized as a Government work by 49 Vic., ch. 14.)*

22. To the Quebec Central Railway Company, for a line of railway from Beauce Junction to the International boundary line, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 211,200

(NOTE.—*The unpaid balance cancelled and further subsidy granted by 51 Vic., ch. 3.)*

23. For the extension of the Canadian Pacific Railway, from its terminus at St. Martin's Junction, near Montreal, or some other point on the Canadian Pacific Railway, to the harbour of Quebec, in such manner as may be approved by the Governor in Council, a subsidy not exceeding \$6,000 per mile, nor exceeding in the whole..... 960,000

(NOTE.—*Further subsidized by the Act 48-49 Vic., ch. 58, sec. 2. See also, below, subsidy for line between Jacques Cartier Junction and St. Martin's Junction, both subsidies being united by the Act last named.)*

24. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway, to the village of Bancroft, in the township of Dungannon, county of Hastings, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000

(NOTE.—*Unpaid balance regranted by 52 Vic., ch. 2.)*

25. To the Pontiac Pacific Junction Railway for a line of railway from Hull or Aylmer to Pembroke, provided the Ottawa river is crossed at some point not east of Lapasse, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 272,000

(NOTE.—*Further subsidized by 51 Vic., ch. 3, and time extended by 52 Vic., ch. 3, clause 5.)*

26. To the Gatineau Railway Company, for a line of railway from Kazuabazua to Le Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000

(NOTE.—*Cancelled by Act 48-49 Vic., ch. 59, which substituted another subsidy. See also Act 52 Vic., ch. 3 subsidy, to the Ottawa and Gatineau Railway Company.)*

27. To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth to Bogart and Bridgewater, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 70,400

(NOTE.—*Cancelled by Act 48-49 Vic., ch. 59, which authorized another subsidy.)*

28. To the Montreal and Western Railway Company, for a line of railway from the end of the line subsidized in the now last Session of Parliament, towards Le Désert, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 160,000

(NOTE.—*Cancelled by 49 Vic., ch. 10, which substituted another subsidy.)*

- 29.** To the Northern and Western Railway Company, for a line of railway from Fredericton to the Miramichi River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (instead of the subsidy proposed in 1883)..... 128,000
(NOTE.—*Further subsidized by 48-49 Vic., ch. 59, and by 49 Vic., ch. 10.*)
- 30.** To the Erie and Huron Railway Company, for a line of railway from Wallaceburg to Sarnia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000
- 31.** To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Perth, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 262,400
(NOTE.—*Further subsidized by 50-51 Vic., ch. 24, and 52 Vic., ch. 3.*)
- 32.** To the Kingston and Pembroke Railway Company, for a line of railway from Mississippi to Renfrew, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 48,000
- 33.** To the Great Northern Railway Company, for that portion of their railway between St. Jérôme and New Glasgow, in the county of Terrebonne, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- 34.** For a line of railway and bridge between the Jacques Cartier Union Railway Junction with the Canadian Pacific Railway and St. Martin's Junction, connecting the Jacques Cartier Union Railway with the North Shore Railway proper, a subsidy not exceeding in the whole..... 200,000
(NOTE.—*See Act 48-49 Vic., ch. 58, sec. 2.*)
- 35.** For a line of railway from Richibucto to St. Louis, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400
- 36.** For a line of railway from Hopewell to Alma, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 51,200
- 37.** For a line of railway from St. Andrews to Lachute, in the county of Argenteuil, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400
NOTE.—*(Cancelled by 49 Vic., ch. 10, which amended the route.)*
- 38.** For a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 217,600
(NOTE.—*Cancelled by 48-49 Vic., ch. 59.*)
- 39.** For a line of railway from Annapolis to Digby, in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 64,000
(NOTE.—*See arrangements authorized by Act 50-51 Vic., ch. 25.*)

- 40.** For a line of the Central Railway, from the head of Grand Lake to the Intercolonial Railway, between Sussex and St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 128,000

(NOTE.—*Revoted 52 Vic., ch. 3.*)

- 41.** To the Caraquet Railway Company, for the extension of their line of railway from Caraquet to Shippegan Harbour, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 76,800

(NOTE.—*In addition to subsidy granted by 46 Vic., ch. 25 ; further subsidized by 49 Vic., ch. 10, and 50-51 Vic., ch. 24.*)

- 42.** For a branch of the Intercolonial Railway, from Matapediac eastward towards Paspebiac, twenty miles, in the Province of Quebec, a sum not exceeding in the whole..... 300,000

- 43.** For a branch of the Intercolonial Railway, from Derby Station to Indiantown, fourteen miles, a sum not exceeding in the whole.... 140,000

“The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies, respectively ; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established, to his satisfaction, their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of July next and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, except the line mentioned in the fourth section of this Act,* which shall be commenced within one year, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the Company with the Government, and which the Government is hereby empowered to make ; the location also of every such line of railway shall be subject to the approval of the Governor in Council ; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed, in comparison with that of the whole work undertaken, to be established by the report of the said Minister. The subsidies to the Province of Quebec shall be capitalized and the interest shall be payable at such time and in such manner as the Government of Canada shall agree upon with the Government of the said Province. The two subsidies last mentioned in the list are for works to be constructed by the Government of Canada.

“Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized as the Governor in Council may determine.”

* The extension of the Canadian Pacific Railway from its terminus at St. Martin's Junction, or some other point on the said railway, to the harbour at Quebec.

By the special Act 47 Vic., cap. 6 (1884). (*Assented to 19th April, 1884*) :—

44. Relating to an agreement with the Province of British Columbia, authority was given *inter alia* for the grant of a subsidy to "the Esquimalt and Nanaimo Railway Company" in aid of the construction of a line of railway and telegraph between the points named; such subsidy to be in lands *en bloc* on Vancouver Island, the boundaries being fixed by the Act, and in money..... \$750,000

By the Act 48-49 Vic., cap. 59 (1885). (*Assented to 20th July, 1885*) :—

45. To the Ottawa, Waddington and New York Railway and Bridge Company, for a line of railway from Ottawa to Waddington, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 166,400
46. To the New Brunswick and Prince Edward Island Railway Company, for a line of railway from Sackville to the Straits of Northumberland, at or near Cape Tormentine, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 118,400
47. To the Montreal and Sorel Railway Company, for a line of railway from St. Lambert to Sorel, a subsidy not exceeding \$1,600 per mile, nor exceeding in the whole..... 72,000
48. To the Brockville, Westport and Sault Ste. Marie Railway Company, for a line of railway from Brockville to Westport, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 128,000
49. To the Quebec and Lake St. John Railway Company, for a line of railway from its junction on the North Shore Railway to St. Raymond, upon condition of the Company extending their road to a point 50 miles north of St. Raymond, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000

(NOTE.—*In addition to the subsidy granted by the Acts 45 Vic., ch. 14, and 46 Vic., ch. 25, further subsidized by 49 Vic., ch. 10, 50-51 Vic., ch. 24, 51 Vic., ch. 3, and 52 Vic., ch. 3.*)

50. To the Northern and Western Railway Company, for a line of railway from the northern end of the 40 miles subsidized between Fredericton and the Miramichi River by 47 Victoria, chapter 8, to Boies-town, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*further subsidized by the Act 49 Vic., ch. 10*)..... 19,200

51. To the Montreal and Champlain Junction Railway Company, for a line of railway from Brosseau's to Dundee, a subsidy not exceeding \$500 per mile, nor exceeding in the whole..... 30,000

(NOTE.—*Further subsidized by Act 50-51 Vic., ch. 24.*)

52. To the Thunder Bay Colonization Railway Company, for a line of railway from the Murillo station of the Canadian Pacific Railway to the east end of Whitefish Lake, a subsidy not exceeding \$3,200 per mile nor exceeding in the whole..... 92,000

(NOTE.—*Cancelled by 51 Vic., ch. 3, which gave a subsidy for a portion of the same road.*)

- 53.** To the Central Ontario Railway Company, for a line of railway from Coe Hill or Rathburn, to Bancroft, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 64,000
- 54.** To the Belleville and North Hastings Railway Company, for a line of railway from the village of Madoc to the junction with the Central Ontario Railway at Eldorado, a subsidy not exceeding \$1,500 per mile, nor exceeding in the whole..... 10,500
- (NOTE.—*Further subsidized by 49 Vic., ch. 10.*)
- 55.** For a line of railway from Long Sault to the foot of Lake Temiscamingue, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 25,600
- (NOTE.—*Further subsidized by 49 Vic., ch. 10, and the whole amended by the Act 50-51 Vic., ch. 24.*)
- 56.** For a line of railway from a point on the Canada Southern Railway near Comber, to Lake Erie, at or near the village of Leamington, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 44,800
- (NOTE.—*Further subsidized by the Act 50-51 Vic., ch. 24.*)
- 57.** To the Napanee, Tamworth and Quebec Railway Company, for a line of railway from Tamworth towards Bogart and Bridgewater, 16 miles, in lieu of the subsidy granted by 47 Vic., chap. 8, a subsidy of..... 70,000
- (NOTE.—*Cancelled by Act 49 Vic., ch. 10, which substituted another subsidy.*)
- 58.** To the Gatineau Railway Company, for a line of railway from Hull station towards Le Désert, a distance of 62 miles, in lieu of the subsidies granted by 46 Vic., ch. 25, and 47 Vic., chapter 8, a subsidy of..... 320,000
- (NOTE.—*Substituted ; also, subsidy granted by 52 Vic., ch. 3.*)
- 59.** For a line of railway from the Grand Piles, on the River St. Maurice, to its junction with Lake St. John Railway, a distance of about 50 miles, in lieu of the subsidy granted by 47 Victoria, chapter 8, for a line of railway from the Grand Piles, on the River St. Maurice, to Lake Edward, a subsidy of..... 217,600
- (NOTE.—*Cancelled by Act 50-51 Vic., ch. 24.*)
- 60.** To the Canada Atlantic Railway Company, for a line of railway from Valleyfield to a point one and a-half mile west of Johnston's, a subsidy not exceeding \$1,600 per mile, and from one and a half miles west of Johnston's to Lacolle ; also from the present terminus at Ottawa to the Chaudière Falls, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000
- (NOTE.—*Further subsidized by 49 Vic., ch. 10, and for their bridge over the St. Lawrence by 50-51 Vic., ch. 24.*)
- 61.** For a line of railway from Indiantown *via* the Miramichi Valley, to its junction with the Northern and Western Railway at or near Boiestown, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 140,800

"The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways, respectively. All the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the Company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister."

"Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connected with those so subsidized, as the Governor in Council may determine."

By the Act 48-49 Vic., cap. 58, (1885). (*Assented to 20th July, 1885*):—

62. "For a railway from a point on the Intercolonial Railway at Rivière du Loup or Rivière Ouelle, in the Province of Quebec, to Edmundston, in the Province of New Brunswick, a subsidy not exceeding two thousand eight hundred dollars per mile for seventy-five miles, and six thousand dollars per mile for eight miles, nor exceeding in the whole two hundred and fifty-eight thousand dollars; the said subsidy to be in addition to the subsidy authorized to be granted in aid of the construction of the said railway by the Act forty-fifth Victoria, chapter fourteen, and constituting, with the subsidy so authorized, a subsidy not exceeding in the whole four hundred and ninety-eight thousand dollars, and to be granted for the said railway upon the terms and conditions specified in the said Act, and payable out of the Consolidated Revenue Fund of Canada; and for the purpose of incorporating the persons undertaking the construction of the said railway and those who shall be associated with them in the undertaking, the Governor may grant to them under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, which shall be similar to such of the franchises, privileges and powers granted to railway companies during the present Session as the Governor shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada" (*additional*). \$258,000

63. "For a line of railway from the south bank of the St. Lawrence River, opposite or near Montreal, to the harbours of St. Andrews, St. John and Halifax, *vid* Sherbrooke, Moosehead Lake, Mattawamkeag, Harvey, Fredericton and Salisbury, a subsidy not exceeding eighty thousand dollars per annum for twenty years, forming in the whole, together with the subsidy authorized by the Act forty-seventh Victoria, chapter eight, for a line of railway connecting Montreal with the said harbours of St. John and Halifax by the shortest and best practicable route, which the line above described is found to be, a subsidy not exceeding two hundred and fifty thousand dollars per annum, the whole of which shall be paid in aid of the construction of such line of railway for a period of twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the company undertaking the work; the said subsidy to be so granted upon the terms and conditions of, and payable out of the Consolidated Revenue Fund in the manner specified in the said last mentioned Act in respect of the subsidy thereby authorized in aid of the said line of railway." Per year for twenty years (*additional*)..... 80,000

64. "The Governor in Council may grant a further subsidy as an aid towards procuring free access as hereinafter described for the trains and traffic of the Canadian Pacific Railway Company from St. Martin's Junction, near Montréal, or from some other point on their railway to be selected by the said company, to the harbour of Quebec, in such a manner as shall be approved by the Governor in Council, that is to say: an additional subsidy not exceeding three hundred and forty thousand dollars, constituting, together with the subsidy authorized by the said last mentioned Act to aid in procuring the extension of the Canadian Pacific Railway to Quebec, and the subsidy also thereby authorized to aid in constructing a line connecting the Canadian Pacific Railway at the Jacques Cartier Union Junction with the North Shore Railway proper (which subsidies shall be applicable to the said first mentioned purpose) a sum not exceeding in the whole the sum of one million five hundred thousand dollars, payable out of the Consolidated Revenue Fund of Canada " (*additional*)..... 340,000

The said Act further provided as follows in relation to this matter:—

"If it should be expedient so to do in order to facilitate such access, the Governor in Council may acquire the North Shore Railway, and may apply the said sum of one million five hundred thousand dollars, or any part thereof, in aid of such acquisition; and upon such acquisition may transfer and convey or lease the said railway to the Canadian Pacific Railway Company, subject to such obligations as the Government shall have assumed in acquiring it."

By the Act 49 Vic., cap. 10 (1886). (*Assented to 2nd June, 1886*):—

65. For a railway from a point at or near Moncton, to Buctouche, in the Province of New Brunswick, thirty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....\$ 96,000
(NOTE.—*Further subsidized by 50–51 Vic., ch. 24.*)

66. For a railway from Ingersoll *via* London to Chatham, in the Province of Ontario, eighty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 256,000

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- 67.** To the Northern and Western Railway Company for ten miles of their railway, intervening between the termini of the portions of their railway for which subsidies are already granted, the one from Fredericton and the other from Indianatown, and an extension of two miles down to deep water at Chatham, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
(NOTE.—*In addition to subsidies granted by Acts 47 Vic., ch. 8, and 48-49 Vic., ch. 59.*)
- 68.** To the Caraquet Railway Company, for ten miles of their railway from the end of the present subsidized portion at Lower Caraquet to Shippegan, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
(NOTE.—*In addition to subsidies granted by 46 Vic., ch. 25, and 47 Vic. ch. 8. This addition was cancelled by Act 50-51 Vic., ch. 24, which substituted another subsidy.*)
- 69.** To the Lake Erie, Essex and Detroit River Railway Company, for thirty-seven miles of their railway, from Windsor to Leamington, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 118,400
(NOTE.—*Cancelled by Act 50-51 Vic., ch. 24, which substituted another subsidy.*)
- 70.** To the Thunder Bay Colonization Railway Company, for fifty-six miles of their railway, from the end of the present subsidized section to a point near Crooked Lake, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 179,200
(NOTE.—*Cancelled by 51 Vic., ch. 3, which authorized another subsidy.*)
- 71.** To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the Village of Parry Sound to the Village of Sandridge, on the line of the Northern Pacific Junction Railway, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 128,000
(NOTE.—*Revoted by Act 52, Vic., ch. 3.*)
- 72.** For a railway from a point at or near New Glasgow or St. Lin, to or near to Montcalm, in the Province of Quebec, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 57,600
- 73.** For a railway from Hereford to the International Railway, in the Township of Eaton, in the Province of Quebec, thirty-four miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. 108,800
- 74.** For a railway from St. Félix to Lake Maskinongé, Parish of St. Gabriel, in the Province of Quebec, ten miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- 75.** For a railway from Glenannan to Wingham, in the Province of Ontario, five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 16,000
- 76.** For a railway from a point at or near the McCann Station on the Intercolonial Railway, to the Joggins, on Cumberland Basin, in the Province of Nova Scotia, twelve miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400
(NOTE.—*Further subsidized by Act 50-51 Vic., ch. 24.*)

- 77.** For a railway from L'Assomption to L'Epiphanie, in the Province of Quebec, three miles and a half, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 11,200
- 78.** To the Montreal and Western Railway Company, for seventy miles of their railway from St. Jérôme, north-westerly towards Desert, in the Province of Quebec, a subsidy of \$5,161 per mile, in lieu of the subsidies granted by 46 Victoria, chapter 25, and 47 Victoria, chapter 8, not exceeding in the whole 361,270
- 79.** For a railway from St. Andrews to the Canadian Pacific Railway at or at any point east of the Town of Lachute, in the County of Argenteuil, in the Province of Quebec, seven miles, in lieu of the subsidy granted by 47 Victoria, chapter 8, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400
(NOTE.—*Revoted by 52 Vic. ch. 3.*)
- 80.** To the Canada Atlantic Railway Company, for twelve miles of their railway from Clarks' Island to Valleyfield and from Lacolle, in the Province of Quebec, to the International boundary, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 38,400
(NOTE.—*In addition to the subsidy granted by 48-49 Vic., ch. 59; also further subsidized by 50-51 Vic., ch. 24, for a bridge across the St. Lawrence.*)
- 81.** For a railway from Truro to Newport, in the Province of Nova Scotia, forty-nine miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 156,800
(*Revoted by 52 Vic., ch. 3.*)
- 82.** To the Quebec and Lake St. John Railway Company, for ninety-five miles of their railway, from a point fifty miles north of St. Raymond to Lake St. John, in the Province of Quebec, a subsidy not exceeding \$1,961 per mile, nor exceeding in the whole (in addition to the subsidy granted by 45 Victoria, chapter 14, and 46 Victoria, chapter 25, of \$3,200 per mile.)..... 186,295
(NOTE.—*Further subsidized by the Act 50-51 Vic., ch. 24.*)
- 83.** To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway from Lorette *via* Cap Rouge to Quebec, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 38,400
(NOTE.—*Revoted by 52 Vic., ch. 3.*)
- 84.** For the construction of wharves and landing stages on the line of the railway from Long Sault to the foot of Lake Temiscamingue, a subsidy of..... 6,000
(NOTE.—*In addition to the subsidy for the construction of the line granted by 48-49 Vic., ch. 59. The addition was cancelled by Act 50-51 Vic., ch. 24, which readjusted the subsidies granted.*)
- 85.** To the Gananoque, Perth and James' Bay Railway Company, seventeen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 54,400
- 86.** For a railway from St. Eustache to St. Placide, County of Two Mountains, eighteen miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 57,600

- 87.** For a railway from a point on the Intercolonial Railway through the Stewiacke Valley, on the line which will afford facilities of communication with the Iron Mines, Spring Side, Upper Stewiacke, and Musquodoboit settlements, twenty-five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 80,000
- 88.** For a railway from Yamaska to the River St. Francis, in the Province of Quebec, ten miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- 89.** For a railway from Perth Centre Station on the New Brunswick Railway, to a point near Plaister Rock Island, in the Province of New Brunswick, twenty-eight miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 89,600
(NOTE.—*Cancelled by 50-51 Vic., ch. 24, which substituted another subsidy.*)
- 90.** For a railway from Fredericton to the Village of Prince William, in the Province of New Brunswick, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 70,400
- 91.** For a railway from a point on the Intercolonial Railway near Newcastle or *via* Douglastown to a point on the River Miramichi, opposite the Town of Chatham, in the Province of New Brunswick, six miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 19,200
- 92.** For a railway from a point on the Canadian Pacific Railway to Eganville, in the Province of Ontario, twenty-two miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 70,400
(NOTE.—*Cancelled by 51 Vic., ch. 3, which authorized another subsidy.*)
- 93.** To the Belleville and North Hastings Railway Company, for seven miles of their railway from the village of Madoc to the Junction with the Central Ontario Railway at Eldorado, in the Province of Ontario, a subsidy (in addition to the subsidy of \$1,500 per mile granted by 48-49 Victoria, chapter 59) not exceeding \$1,700 per mile, nor exceeding in the whole..... 11,900
(NOTE.—*Additional.*)
- 94.** To the Napanee, Tamworth and Quebec Railway Company, for eighteen miles of their railway from Tamworth to Tweed, in lieu of the subsidy granted by 48-49 Victoria, chapter 59, a subsidy of 70,000
(NOTE.—*Further subsidized by the Act 50-51 Vic., ch. 24.*)
- 95.** To the Albert Railway Company, for their railway from Salisbury to Hopewell, in the Province of New Brunswick, which is a feeder to the Intercolonial Railway, in the form of a loan, repayable at such time and secured in such manner as the Governor in Council determines, a subsidy of..... 15,000

"The subsidies hereinbefore mentioned as to be granted to the companies named for that purpose, shall be granted to such companies, respectively; the other subsidies shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively. All the lines for the

construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in the agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council, and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister: Provided always, that the granting of such subsidies to the companies mentioned, respectively, shall be subject such conditions for securing such running power or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council may determine."

By the Act 50-51 Vic., cap. 24 (1887.) (*Assented to 23rd June, 1887:*)—

96. To the St. Catharines and Niagara Railway Company, for twelve miles of their railway from the City of St. Catharines to the bridge over the Niagara River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	\$38,400
97. To the Vaudreuil and Prescott Railway Company, for thirty miles of their railway from Vaudreuil towards Hawkesbury, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
98. To the Richmond Hill Junction Railway Company, for five miles of their railway from Richmond Hill Junction on the Northern Railway of Canada to Richmond Hill Village, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	16,000
99. To the Drummond County Railway Company, for thirty miles of their railway from Drummondville towards Nicolet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
100. To the Joggins Railway Company, for one and a quarter miles of their railway extending from the southern end of the portion subsidized by the Act forty-ninth Victoria, chapter ten, to the wharves, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (<i>additional</i>).....	4,000
101. To the Moncton and Buctouche Railway Company, for two miles of their railway from the west end of the portion subsidized by the Act forty-ninth Victoria, chapter ten, to Moncton, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (<i>additional</i>).....	6,400
102. To the Beauharnois Junction Railway Company, for thirty miles of their railway from St. Martin's towards St. Anicet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	96,000
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- 103.** To the Harvey Branch Railway Company, for three miles of their railway from the southern terminus of the Albert Railway to Harvey Bank, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 9,600
- 104.** To the Brantford, Waterloo and Lake Erie Railway Company, for eighteen miles of their railway from the Town of Brantford to the Village of Hagersville or the Village of Waterford, or some intermediate point on the Canada Southern Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 57,600
- 105.** To the Guelph Junction Railway Company, for sixteen miles of their railway from its junction with the Canadian Pacific Railway to the Town of Guelph, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 51,200
- 106.** To the Massawippi Railway Company, for ten miles of their railway from a point on the Atlantic and North Western Railway, near the Village of Magog, to Ayer's Flat Station, on the Massawippi Valley Railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 32,000
- (NOTE.—*Cancelled by 51 Vic., ch. 3, another subsidy being substituted.*)
- 107.** To the Napanee, Tamworth and Quebec Railway Company, for four miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter fifty-nine, to Tweed, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*additional, further subsidized by 52 Vic., ch. 3.*)..... 12,800
- 108.** To the Dominion Lime Company, for seven miles of their railway from a point on the Quebec Central Railway, in the Township of Dudswell to the Dudswell Lime Company's quarries, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400
- 109.** To the South Norfolk Railway Company, for seventeen miles of their railway from Port Rowan to the Town of Simcoe, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 54,400
- 110.** To the Jacques Cartier Union Railway Company, for extending and completing their railway, a subsidy of (*additional*) 20,000
- 111.** For a line of railway from Mount Forest to Walkerton, twenty-four miles in length, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 76,800
- 112.** To the Oshawa Railway and Navigation Company, for seven miles of their railway from Port Oshawa towards Raglan, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 22,400
- 113.** To the Saguenay and Lake St. John Railway Company, for thirty miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000

(NOTE.—*Transferred by 51 Vic., ch. 3, to the Quebec and Lake St. John Railway Co.*)

- 114.** To the Great Eastern Railway Company, for thirty miles of their railway from the River St. Francis to the Arthabaska Railway, at St. Grégoire Station, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 96,000
(NOTE.—Further subsidized by 52 Vic., ch. 3.)
- 115.** To the Ontario and Pacific Railway Company, for six miles of their railway from the northern end of the portion subsidized by the Act forty-seventh Victoria, chapter eight, to the town of Perth, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (additional)..... 19,200
- 116.** To the Caraqueet Railway Company, for seven miles of their railway from Lower Caraqueet to Shippegan, in lieu of the subsidy granted by the Act forty-ninth Victoria, chapter ten, a subsidy not exceeding in the whole (substituted)..... 32,000
- 117.** To the St. Lawrence and Lower Laurentian and Saguenay Railway Company, for the section of their railway from Grand Piles, on the St. Maurice River, to its junction with the Quebec and Lake St. John Railway, in lieu of the subsidy granted by the Act passed in the Session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter fifty-nine, for a line of railway from Grand Piles, on the St. Maurice River, to its Junction with the Lake St. John Railway, a distance of about fifty miles, a subsidy of (substituted) 217,600
- 118.** To the St. John Valley and River du Loup Railway Company, for twenty-two miles of their railway from the Village of Prince William towards the Town of Woodstock, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 70,400
- 119.** To the Lake Temiscamingue Railway Company, for four short sections of railway, in all about two miles in length, to overcome the rapids of the Ottawa River, known as "La Mi-Charge," "La Cave," "Les Erables," and "La Montagne," and for the construction of wharves and landing stages at these rapids, to connect the Canadian Pacific Railway at Mattawa with Lake Temiscamingue by steamboats, railways and other works (in lieu of a portion two miles in length, out of the eight miles of railway subsidized by the Act passed in the Session held in the forty eighth and forty-ninth years of Her Majesty's reign, chapter fifty-nine, under which about six miles of railway have already been built from the foot of Long Sault proper to the foot of Lake Temiscamingue, and in lieu also of the subsidy granted by the Act forty-ninth Victoria, chapter ten), a subsidy of (substituted)..... 12,400
- 120.** To the Carillon and Grenville Railway Company, for twelve miles of their railway from St. Eustache to Sault au Recollet, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 38,400
- 121.** To the Minudie Branch Railway Company, for five and a half miles of their railway from its junction with the Joggins Railway, near the River Hebert railway bridge, to the Village of Minudie, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole
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- 122.** To the Lake Témiscamingue Colonization and Railway Company, for ten and a-half miles of their railway from the Long Sault to Lake Kippewa, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*additional*)..... 33,600
- 123.** To the Leamington and St. Clair Railway Company, for two miles of their railway from the north end of the section subsidized by the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign, chapter fifty-nine, to the Village of Comber, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*additional*)..... 6,400
- 124.** To the Cumberland Railway and Coal Company, for fourteen miles of their railway from a point on the Spring Hill and Parrsboro' Railway, near Spring Hill, to a point on the railway between Oxford and New Glasgow, near Oxford Village, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 44,800
- 125.** To the Montreal and Champlain Junction Railway Company, a subsidy of (*in addition to the subsidy granted by Act 48-49 Vic., ch. 59.*) 64,000
- 126.** To the Quebec and Lake St. John Railway Company, for nine miles of their railway, the distance which the previous subsidies granted are short of covering from the City of Quebec to Lake St. John, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*in addition to subsidies granted by Acts 45 Vic., ch. 14; 46 Vic., ch. 25; 48-49 Vic., ch. 59, and 49 Vic., ch. 10.*)..... 28,800
- 127.** To the Temiscouata Railway Company, for thirty miles of a branch of their railway from Edmundston towards the St. Francis River, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*in addition to subsidies granted for their main line by 45 Vic., ch. 14, and 48-49 Vic., ch. 3.*)..... 96,000
- (NOTE.—Cancelled by 51 Vic., ch. 3, which authorized another subsidy.)
- 128.** To the Cornwallis Valley Railway Company, for thirteen miles of their railway from Kentville to Kingsport, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*further subsidized by 52 Vic., ch. 3.*) 41,600
- 129.** To the Nova Scotia Central Railway Company, for thirty-four miles of their railway, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 108,800
- 130.** To the Tobique Valley Railway Company, for fourteen miles of their railway from Perth Centre Station towards Plaister Rock Island, in lieu of the subsidy granted by the Act forty-ninth Victoria, chapter ten, for a railway from Perth Centre Station, on the New Brunswick Railway, to a point near Plaister Rock Island, a subsidy of (*substituted*)..... 89,600
- 131.** For a railway from Woodstock towards Centreville, twenty miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole 64,000
- 132.** For a railway bridge over the St. Lawrence River, at Coteau Landing, on the line of the Canada Atlantic Railway, a subsidy of fifteen per cent. on the value of the structure, not to exceed (*in addition to subsidies granted for the main line by 48-49 Vic., ch. 59, and 49 Vic., ch. 10*)..... 180,000

133. To the Lake Erie, Essex and Detroit River Railway Company, for twenty-seven miles of their railway, in lieu of the subsidy granted by the Act forty-ninth Victoria, chapter ten, a subsidy not exceeding (<i>substituted</i>).....	118,400
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“For the purpose of granting corporate powers to persons or companies undertaking the construction of railways or parts of railways, mentioned in the next preceding section, for the construction of which no corporate powers exist at the time of the passing of this Act, the Governor in Council may grant to them, under such corporate name as he shall deem expedient, a charter conferring upon them the franchises, privileges and powers requisite for the said purposes, as the Governor in Council shall deem most useful or appropriate to the said undertaking; and such charter being published in the *Canada Gazette*, with any Order or Orders in Council relating to it, shall have force and effect as if it were an Act of the Parliament of Canada.

“The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; the other subsidies, including subsidies granted for railways over a line extending beyond a point to which any company hereinbefore mentioned by name is authorized to construct their railway, shall be granted to such companies as shall be approved by the Governor in Council as having established to his satisfaction their ability to construct and complete the said railways respectively; all the lines for the construction of which subsidies are granted shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the Company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized, except as regards the subsidy for the bridge over the St. Lawrence River upon which shall be paid fifteen per cent. of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

The granting of such subsidies to the companies mentioned, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidized, as the Governor in Council determines.

Notwithstanding anything contained in the Act forty-fifth Victoria, chapter fourteen, or in the Act forty-sixth Victoria, chapter twenty-five, the balances of the sums granted for a railway from St. Raymond to Lake St. John and to the Quebec and Lake St. John Railway Company by the said Acts respectively, which have not

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yet been paid by the Government, may be paid at any time within one year from the passing of this Act, subject to the conditions in the said Acts contained.

By the Act 51 Vic., ch. 3 (1888). (*Assented to 22nd May, 1888*):—

- 134.** To the Ottawa and Parry Sound Railway Company, for 22 miles of their railway from a point on the Canadian Pacific Railway to Eganville, in lieu of the subsidy granted by 49 Victoria, Chapter 10, for a railway from a point on the Canadian Pacific Railway to Eganville, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*substituted*).....\$ 70,400 00
- 135.** To the Nova Scotia Central Railway Company, for 46 miles of their railway, in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*additional*) 147,200 00
- 136.** To the Montreal and Champlain Junction Railway Company, for 3 miles of their railway from the end of the present subsidized section, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*additional*) 9,600 00
- 137.** To the Massawippi Junction Railway Company, for their railway from a point on the Atlantic and North-West Railway near the Village of Magog, to Ayer's Flat Station on the Massawippi Valley Railway, in lieu of the subsidy granted by 50-51 Victoria, Chapter 24, a subsidy of (*substituted*)..... 32,000 00
- 138.** To the Pontiac Pacific Junction Railway Company, for bridging the several channels of the Ottawa River at Culbute and west thereof, a subsidy of \$31,500, to be paid out monthly as the work progresses, upon the certificate of the Chief Engineer of Government Railways, in the proportion which the value of the work executed bears to the value of the whole work undertaken, and for 3 miles of their railway extending from a point 3 miles east of Pembroke to Pembroke in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole \$9,600, provided that the entire work subsidized upon this railway shall be completed within four years from the passing of this Act, the subsidy granted by this Act not to exceed in the whole (*additional*)..... 41,100 00
- 139.** To the Port Arthur, Duluth and Western Railway Company, for 84½ miles of their railway from Port Arthur towards Gun Flint Lake, in lieu of the subsidies granted by 48-49 Victoria, Chapter 59, and 49 Victoria, Chapter 10, for the construction of a railway from Murillo Station to Crooked Lake, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*substituted*)..... 271,200 00
- 140.** To the Quebec and Lake St. John Railway Company, for 30 miles of their railway from Lake St. John towards Chicoutimi, or from Chicoutimi towards Lake St. John, being a transfer made at the request of the Saguenay and Lake St. John Railway Company of the subsidy granted to them by 50-51 Victoria, Chapter 24, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*substituted*)..... 96,000 00

141. To the Temiscouata Railway Company, for 20 miles of their branch railway from Edmundston towards the St. Francis River, in the Province of Quebec, in lieu of the subsidy granted by 50-51 Victoria, Chapter 24, a subsidy of (<i>substituted</i>).....	100,000 00
142. To the Quebec Central Railway Company, for the construction and completion of a line of railway from Saint Francis Station to a point on the Atlantic and North-West Railway near Moose River, 90 miles, in lieu of the balance of the subsidy, unearned, granted by 47 Victoria, Chapter 8, a subsidy not exceeding \$21,191.54 per annum for twenty years, or a guarantee of a like sum for a like period as interest on the bonds of the Company, such annual subsidy for twenty years representing a grant in cash of (<i>substituted</i>).....	288,000 00
143. To the Central Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 4,052 tons of used iron rails and fastenings loaned to the St. Martin's and Upham Railway Company, now forming part of the Central Railway, which rails and fastenings stand in the Public Accounts as an asset of.	83,612 54
144. To the Elgin, Petitediac and Havelock Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 2,201 tons of used iron rails and fastenings loaned to the Elgin Branch Railway, now forming part of the Elgin, Petitediac and Havelock Railway, which rails and fastenings stand in the Public Accounts as an asset for.....	44,252 82
145. To the Kent Northern Railway Company of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 2,549 tons of used iron rails and fastenings loaned to the Company, which rails and fastenings stand in the Public Accounts as an asset for.....	58,334 27
146. To the Halifax Cotton Company of Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 233 tons of used iron rails and fastenings loaned to the Company, which rails and fastenings stand in the Public Accounts as an asset for.....	4,335 00
147. To the Steel Company of Canada, in Nova Scotia, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 597 tons of used iron rails and fastenings loaned to the Company, which rails and fastenings stand in the Public Accounts as an asset for.....	11,964 66

- 148.** To the Albert Railway Company of New Brunswick, a grant as subsidy (the section of road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 726 tons of used iron rails and fastenings loaned to the Company, which rails and fastenings stand in the Public Accounts as an asset for..... 14,665 45
- 149.** To the Chatham Branch Railway of New Brunswick, a grant as subsidy (the road to be first laid with new steel rails weighing not less than 56 pounds per lineal yard, and after an Order in Council has been passed authorizing their transfer to the Company) of 958 tons of used iron rails and fastenings loaned to the Company, which rails and fastenings stand in the Public Accounts as an asset for..... 24,439 84

All the lines, for the construction of which subsidies are granted, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council, and shall also be constructed according to descriptions and specifications, and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the Company with the Government, and which the Government is hereby empowered to make; the location also of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies respectively, payable in cash, shall be payable out of the Consolidated Revenue Fund of Canada by instalments, on the completion to the satisfaction of the Minister of Railways and Canals, of each section of the railway of not less than 10 miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon completion of the work subsidized.

By the Act 52 Vic., cap 3 (*Assented to 2nd May, 1889*):—

- 150.** To the Ontario and Pacific Railway Company, for a line of railway from Cornwall to Ottawa, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole (*substituted for a lapsed subsidy*)..... \$172,400 00
- 151.** To the Ottawa and Gatineau Railway Company, for a line of railway from Hull Station towards Le Desert, a distance of 62 miles, a subsidy not exceeding in the whole (*re-vote*)..... 320,000 00
- 152.** To the Cap Rouge and St. Lawrence Railway Company, for twelve miles of their railway, from Lorette *viâ* Cap Rouge to Quebec, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Revote*)..... 38,400 00
- 153.** To the Parry Sound Colonization Railway Company, for forty miles of their railway, from the village of Parry Sound to the village of Sundridge or some other point on the line of the Northern and Pacific Junction Railway, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Revote*) 128,000 00

154. For a railway from St. Andrew's to the Canadian Pacific Railway at, or at any point east of the town of Lachute, in the county of Argenteuil, in the Province of Quebec, seven miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (<i>Revote</i>).....	22,400 00
155. For a railway from Truro or a point between Truro and Stewiacke, to Newport or to Windsor, in the Province of Nova Scotia, forty-nine miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (<i>Revote, with change of termini</i>).....	156,800 00
156. For a line of the Central Railway from the head of Grand Lake to the Intercolonial Railway, in the Province of New Brunswick, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (<i>Revote</i>).....	128,000 00
157. To the Albert Southern Railway Company, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole. (<i>Revote</i>).....	31,771 43
158. To the Baie des Chaleurs Railway Company, the balance remaining unpaid of the subsidy mentioned in the Act 49th Victoria, chapter 17, not exceeding in the whole. (<i>Revote</i>). ..	244,500 00
159. To the Irondale, Bancroft and Ottawa Railway Company, for a line of railway from the Victoria branch of the Midland Railway to the village of Bancroft, in the county of Hastings, the balance remaining unpaid of the subsidy granted by the Act 47th Victoria, chapter 8, not exceeding in the whole. (<i>Revote</i>)	145,000 00
160. To the Northern and Pacific Junction Railway Company, for a railway from Gravenhurst to Callander, the balance remaining unpaid of the subsidies granted by the Acts 45th Victoria, chapter 14, and 46th Victoria, chapter 25, not exceeding in the whole. (<i>Revote</i>).....	35,000 00
161. For a railway from some point on the Joggins Railway, near the Hebert River, to Young's Mills, in the Province of Nova Scotia, a distance of five miles, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	16,000 00
162. To the St. Clair Frontier Tunnel Company, for the construction of a tunnel under the St. Clair River, from a point at or near Sarnia, to a point at or near Port Huron, a subsidy not exceeding in the whole.....	375,000 00
163. To the Pontiac and Renfrew Railway Company, for six miles of their railway from the north bank of the Ottawa River, opposite Braeside, or from Bristol Iron Mines, to the Pontiac Pacific Junction Railway, near the Quion River, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	19,200 00
164. To the Quebec, Montmorency and Charlevoix Railway Company, for thirty miles of their railway, from the east bank of	

the St. Charles River, to or near to Cape Tourmente, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....		96,000 00
165.	To the Fredericton and St. Mary's Bridge Company, for a bridge over the St. John River at Fredericton, in the Province of New Brunswick, a subsidy not exceeding in the whole. (<i>Additional</i>).....	30,000 00
166.	To the Napanee, Tamworth and Quebec Railway Company, for seven miles of their railway, from a point at or near Yarker, to a point at or near Harrowsmith, and to a company for three miles of railway from a point at or near Harrowsmith to a point at or near Sydenham, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole. (<i>Additional</i>). ..	32,000 00
167.	For a railway from a point near Sicamous, on the Canadian Pacific Railway, to a point on Lake Okanagan, for fifty-one miles of such railway, a subsidy not exceeding \$3,200 per mile, and not exceeding in the whole.....	163,200 00
168.	To the Cornwallis Valley Railway Company, for one mile of their railway, from the end of the line subsidised by the Act 50-51 Victoria, chapter 24, to Kingsport, in the Province of Nova Scotia, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (<i>Additional</i>).....	3,200 00
169.	To the Lake Témiscamingue Colonisation and Railway Company, for fifteen miles of their railway, from Mattawa station on the Canadian Pacific Railway, towards the Long Sault, or from the Long Sault towards the said Mattawa station, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (<i>Additional</i>).....	48,000 00
170.	To the Maskinongé and Nipissing Railway Company, for fifteen miles of their railway from a point on the Canadian Pacific Railway at or near Maskinongé or Louiseville, towards the Parish of St. Michel des Saints, on the River Mattawin in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	48,000 00
171	To the Kingston, Smith's Falls and Ottawa Railway Company, for twenty miles of their railway, from the city of Kingston towards Smith's Falls, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole...	64,000 00
172	To the South Ontario Pacific Railway Company, for forty-nine and one-half miles of their railway, from Woodstock to Hamilton, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	158,400 00
173.	For a railway from St. Césaire to St. Paul d'Abbotsford, in the Province of Quebec, five miles, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole	16,000 00
174.	To the Great Eastern Railway Company, for twenty miles of their railway, from the east end of the line subsidised by the	

Act 50-51 Victoria, chapter 24, at St. Grégoire, towards the Chaudière Junction Station on the Intercolonial Railway, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Additional*)..... 64,000 00

175. To the Drummond County Railway Company for four and one-half miles of their railway, from the end of the line subsidised by the Act 50-51 Victoria, chapter 24, to Ball's Wharf, on the St. Lawrence River, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Additional*)..... 14,400 00

176. To the St. Catharines and Niagara Central Railway Company, for twenty miles of their railway, from the end of the line subsidised by the Act 50-51 Victoria, chapter 24, at St. Catharines, towards the city of Hamilton, in the Province of Ontario a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Additional*)..... 64,000 00

177. To the Quebec and Lake St. John Railway Company, for twenty miles of their railway, from the end of the section of thirty miles from Lake St. John towards Chicoutimi subsidised by the Act 51 Victoria, chapter 3, towards Chicoutimi, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Additional*)..... 64,000 00

178. To the Grand Trunk, Georgian Bay and Lake Erie Railway Company, for fifteen miles of their railway, from the village of Tara or some point between Tara and Hepworth, to the town of Owen Sound, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 48,000 00

179. To the Hereford Railway Company, for fifteen miles of their railway, from Cookshire to a junction with the Quebec Central Railway at Dudswell, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Additional*)..... 48,000 00

180. To the Massawipi Junction Railway Company, for fifteen miles of their railway, from Ayer's Flat to Coaticook, in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*NOTE.—In addition to subsidy voted by 51 Vic., ch 3*)..... 48,000 00

181. To the Brockville, Westport and Sault Ste. Marie Railway Company, for twenty miles of their railway, from a point at or near Newboro, towards Palmer's Rapids, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole. (*Revote*)..... 64,000 00

182. To the Thousand Islands Railway Company, for four miles of their railway, from a point near the St. Lawrence River, in Gananoque village, to Gananoque Junction of the Grand Trunk Railway, and for thirteen miles of their railway, from Gananoque Junction of the Grand Trunk Railway to a junction with the Brockville, Westport and Sault Ste. Marie Railway, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole..... 54,400 00

183. For a railway from Cape Tormente towards Murray Bay, twenty miles in the Province of Quebec, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000 00
184. To the Amherstburg, Lake Shore and Blenheim Railway Company, for twenty miles of their railway, in the Province of Ontario, a subsidy not exceeding \$3,200 per mile, nor exceeding in the whole.....	64,000 00

2. So much of the subsidy of three thousand two hundred dollars per mile, which, under the provisions of the Act forty-ninth Victoria, chapter seventeen, and of this Act, may be paid to the Baie des Chaleurs Railway Company in respect of the thirty miles of their railway, from the seventieth to the hundredth mile, eastward from Metapediac, shall be applicable to the section of the said railway, comprised between the fortieth and the seventieth mile thereof, eastward from Metapediac, instead of to the said first mentioned section of thirty miles, making six thousand four hundred dollars per mile applicable to the secondly mentioned section of thirty miles; but the foregoing provision shall be subject to the condition that the said company undertake to complete the thirty miles of their railway from the seventieth to the hundredth mile eastward from Metapediac within a reasonable time, not to exceed four years, to be fixed by Order in Council, and without any further subsidy from the Government of Canada, and that they deposit with the Minister of Railways and Canals, as security to the Crown that they will well and truly carry out their undertaking, their bonds to the amount of two hundred thousand dollars.

3. The subsidies hereinbefore mentioned as to be granted to companies named for that purpose, shall be granted to such companies respectively; all the lines for the construction of which subsidies are granted, unless they are already commenced, shall be commenced within two years from the first day of August next, and completed within a reasonable time, not to exceed four years, to be fixed by Order in Council; and shall also be constructed according to descriptions and specifications and upon conditions to be approved by the Governor in Council, on the report of the Minister of Railways and Canals, and specified in an agreement to be made in each case by the company with the Government, and which the Government is hereby empowered to make; the location, also, of every such line of railway shall be subject to the approval of the Governor in Council; and all the said subsidies, respectively, shall be payable out of the Consolidated Revenue Fund of Canada, by instalments, on the completion of each section of the railway of not less than ten miles, proportionate to the value of the portion so completed in comparison with that of the whole work undertaken, to be established by the report of the said Minister, or upon the completion of the work subsidised, except as respects the tunnel under the St. Clair River, in which case there shall be paid fifteen per cent. of the value of work done on monthly progress estimates, certified by the Chief Engineer, and upon the approval of the Minister of Railways and Canals.

4. The granting of such subsidies, respectively, shall be subject to such conditions for securing such running powers or traffic arrangements and other rights, as will afford all reasonable facilities and equal mileage rates to all railways connecting with those so subsidised, as the Governor in Council determines.

5. And for the removal of doubts it is hereby declared and enacted that the provision in the Act passed in the fifty-first year of Her Majesty's reign and chaptered three, relating to the Pontiac Pacific Junction Railway Company extended and extends the several subsidies in aid of the said company for four years from the passing of the said Act, that is to say, from the twenty-second day of May, one thousand eight hundred and eighty-eight.

LAND SUBSIDIES.

By 47 Vic., cap. 25, clause 7, (1884). (*Assented to 19th April, 1884*):—

185. "The Governor in Council is hereby authorised, in aid of the construction of a railway from some point on the Canadian Pacific Railway to Hudsons Bay to make a free grant of not more than six thousand four hundred acres for each mile of railway within Manitoba, and not more than twelve thousand eight hundred acres for each mile in the North West Territories."

By 48-49 Vic., cap. 60 (1885). (*Assented to 20th July, 1885*):—

186. To the North-Western Coal and Navigation Company (Limited), Dominion lands to an extent not exceeding three thousand eight hundred acres for each mile of the company's railway, from Medicine Hat to the coal banks on the Belly River, about one hundred and ten miles.

187. To the Manitoba and South-Western Colonization Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from its commencement at Winnipeg to its terminus at Whitewater Lake, about one hundred and fifty miles.

188. To the Manitoba and North-Western Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Portage la Prairie to the crossing of the south branch of the River Saskatchewan, twenty miles from Prince Albert, about four hundred and thirty miles.

189. To the Qu'Appelle, Long Lake and Saskatchewan Railroad and Steamboat Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from its commencement near Regina, to the navigable waters of Long Lake.

The said grants, and each of them, may be so made in aid of the construction of the said railways respectively, in the proportion and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses, at the rate of ten cents per acre in cash on the issue of the patents therefor.

By 49 Vic., cap. 11 (1886). (*Assented to 2nd June, 1886*) :—

- 190.** To the Manitoba and North-Western Railway Company, Dominion lands to the extent of six thousand four hundred acres per mile for each mile of the company's branch railway running from a point on the main line of that railway, at or near Todburn, in a north-westerly direction through the county of Russell to the Assiniboine River, near the town of Shellmouth, about twenty-six miles.
- 191.** To the North-West Central Railway Company, or to such other company as may undertake the construction of the railway or a railway from a point on the Manitoba and North-Western Railway, *via* Rapid City, westward, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway, for the whole distance from Brandon Station, on the Canadian Pacific Railway, or from such point on the Manitoba and North-Western Railway as aforesaid, to Battleford, in the Provisional District of Saskatchewan, about four hundred and fifty miles.
- 192.** To the Wood Mountain and Qu'Appelle Railway Company, Dominion lands to the extent of six thousand four hundred acres for each mile of the company's railway for the whole distance commencing at a point in township number four, in range number thirty, west of the second meridian, in the Dominion lands system of survey, passing through the town of Fort Qu'Appelle, to join the Manitoba and North-Western Railway at a point to be fixed for that purpose by the Governor in Council, about two hundred and forty miles.

The said grants, and each of them may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses at the rate of ten cents per acre in cash on the issue of the patents therefor.

By 50-51 Vic., cap. 23 (1887). (*Assented to 23rd June, 1887*) :—

- 193.** To the Alberta and Athabaska Railway Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway from some point on the Bow River or Canadian Pacific Railway, at or between Calgary and Crowfoot Creek, to a point near the town plot of Edmonton, about three hundred miles.
- 194.** To the Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the company's railway, from a point near the northern terminus of the completed portion of that railway, at or near Long Laketon, on the navigable waters of Long Lake, to a point at or near where the fifty-second parallel of latitude crosses the South Saskatchewan River, thence to a point at or near the elbow of the North Saskatchewan River, with branches to Prince Albert and Battleford, about three hundred and twenty-five miles.

- 195.** To the Medicine Hat Railway and Coal Company Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the Company's railway, from a point at or near Medicine Hat, on the line of the Canadian Pacific Railway, to the coal field in or near townships twelve and thirteen, range six, west of the fourth principal meridian, a distance of about eight miles, to be selected out of such lands as are at the disposal of the Government in the proximity of the line of the Company's railway.

The said grants, and each of them may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof,—each of the said enterprises being respectively subject to any modification thereof which may hereafter be made by the Governor in Council; and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses at the rate of ten cents per acre in cash on the issue of the patents therefor.

By 52 Vic., cap. 4. (*Assented to 2nd May, 1889*) :—

- 196.** To the North-Western Coal and Navigation Company (limited), in addition to the grant provided for by section one of the Act passed in the session held in the forty-eighth and forty-ninth years of Her Majesty's reign and chaptered sixty, Dominion lands to an extent not exceeding two thousand six hundred acres for each mile of the Company's railway from Dunmore Station, on the Canadian Pacific Railway, to Lethbridge, on the Belly River, the present terminus of the said railway, a distance of one hundred and nine and one-half miles,—such additional grant to be made only on condition that the gauge of the said railway be made standard width; and also to the said North-Western Coal and Navigation Company (limited), Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the Company's railway from Lethbridge to the International Boundary, a distance of about fifty miles.
- 197.** To the Red Deer Valley Railway and Coal Company, Dominion lands to an extent not exceeding six thousand four hundred acres for each mile of the Company's railway from Cheadle Station, on the Canadian Pacific Railway, to its terminus at a point in or near township twenty-nine, range twenty-three, west of the fourth meridian, a distance of about fifty-five miles.
- 198.** To the North-Western Railway Company of Canada, Dominion lands to an extent not exceeding ten thousand acres for each mile of the Company's railway from Calgary, on the Canadian Pacific Railway, northerly to a point on the North Saskatchewan River, at or near Edmonton, a distance of about two hundred and ten miles; and also to the said North-Western Railway Company of Canada, Dominion lands to an extent not exceeding ten thousand acres for each mile of the Company's railway from Calgary, southerly to Lethbridge, a distance of about one hundred and twenty miles.
- 199.** To the Lake Manitoba Railway and Canal Company, Dominion lands to an extent not exceeding six thousand acres for each mile of the Company's railway from Portage la Prairie to the southern boundary of Lake Manitoba, a distance of about seventeen miles.

2. The said grants and each of them may be so made in aid of the construction of the said railways respectively, in the proportions and upon the conditions fixed by the Orders in Council made in respect thereof, and, except as to such conditions, the said grants shall be free grants, subject only to the payment by the grantees respectively of the cost of survey of the lands and incidental expenses at the rate of ten cents per acre in cash on the issue of the patents therefor.

3. The Governor in Council may make the grant of land provided for by section three of the Act forty-ninth Victoria, chapter eleven, being for the line of the Wood Mountain and Qu'Appelle Railway, of about two hundred and forty miles in length, applicable to the line of railway of the said Company, as authorised by the Act respecting the Wood Mountain and Qu'Appelle Railway Company passed during the present session of Parliament, upon the like terms and subject to the like conditions as those upon which the grant hereinbefore mentioned was authorised to be made to the said Company by the Act in this section first cited.

CANALS.

The canal systems of the Dominion, under Government control, in connection with lakes and navigable rivers, are as follows:—

- 1. The River St. Lawrence and Lakes
- 2. The River Ottawa.
- 3. The Rideau Navigation, from Ottawa to Kingston.
- 4. The Trent Navigation.
- 5. The River Richelieu, from the St. Lawrence to Lake Champlain.
- 6. St. Peter's Canal, Bras d'Or Lake, Nova Scotia.

The collection of the revenue derivable from the canals of the Dominion, formerly in the hands of the Department of Inland Revenue, has now been assumed by this Department, under an Order in Council of the 4th of June, 1889, as authorized by the Act 52 Victoria, chap. 19. Details relating to this branch will be found in the Appendices, page 164 and following pages.

The following statement shows the amount accrued on each canal, for canal revenue proper and hydraulic rents, etc., during the fiscal year ended the 30th of June, 1889.

Name of Canal.	Tolls.	Wharfage and Storage.	Fines and Damages.	Other Receipts.	Hydraulic Rents.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland.....	182,007 90		1,000 00		4,061 91	187,069 81
St. Lawrence.....	55,517 26	5,718 05	136 00	11,071 57	29,216 34	101,659 22
Chambly.....	23,270 43		15 00		80 00	23,365 43
Ottawa.....	53,637 63		2 00		20 00	53,659 63
Rideau.....	6,864 24	35 78	17 40	222 40	615 75	7,755 57
Newcastle District.....	259 72					259 72
St. Peter's.....	2,510 50					2,510 50
	324,067 68	5,753 83	1,170 40	11,293 97	33,994 00	376,279 88

RIVER ST. LAWRENCE AND LAKES.

The River St. Lawrence, with the system of canals established on its course above Montreal, and the Lakes Ontario, Erie, St. Clair, Huron and Superior, with connecting canals, afford a course of water communication extending from the Straits of Belle-Ile to Port Arthur, at the head of Lake Superior, a distance of 2,260 statute miles. The distance to Duluth is 2,384 miles (A table giving the intermediate distances will be found in Appendix No. 14, p. 123.)

The difference in level between Lake Superior and the point on the St. Lawrence near to Three Rivers, where tidal influence ceases, is about 600 feet.

The Dominion canals, constructed between Montreal and Lake Erie, are the Lachine, Beauharnois, Cornwall, Farran's Point, Rapide Plat, Galops and Welland, Their aggregate length is 70½ miles: total lockage (or height directly overcome by locks) is 533¾ feet; number of locks, 53.

Communication between Lakes Huron and Superior is obtained by means of the Sault Ste. Marie Canal, situated on the United States side of the river.

The canal is a little over a mile in length, and has one lock, the dimensions being:—length 515 feet, width 80 feet, with 16 feet of water on the sills, and a lift of about 18 feet.*

Steps have been taken by the Dominion Government for the construction of a lock and canal on the Canadian side, a general description of which will be found further on in the present report, page .

In 1841, as was observed in the report presented last year, at the time when the system of canals between Montreal and Lake Ontario was designed, it was in contemplation to afford a depth, at all stages of the St. Lawrence waters, of 9 feet, a depth seemingly, from the data then possessed, secured through the works proposed. The River St. Lawrence is, however, from various causes, subject to fluctuations, the extent of which it was impossible, at the time when these canals were originally constructed, to arrive at with precision, and the continued observations and experience of subsequent years have shown that while the intermediate river reaches, at all times, afford ample depth for vessels of 9 feet draught, in the canals themselves, at certain periods of low water, this depth cannot be maintained, the bottom not having been sunk to a sufficiently low level.

The following list shows the least depth of water on the sills of the locks of the St. Lawrence Canals at a time of exceptionally low water, in the year 1872 (*vide* report of Chief Engineer, 1880)—

	Feet.	Inches.
Williamsburg Canals—		
Rapide Plat, guard lock.....	6	7
“ “ lower entrance.....	7	0

* From the report of the Chief of Engineers, U. S. army dated the 1st of October, 1888 for the fiscal year ended the 30th June, 1888, the last available, it appears that the construction of a new and still larger lock is in progress, taking the site occupied by the two old locks built in 1855, the canal itself being deepened to correspond. The dimensions of the proposed lock will be,—length 800 feet, width 100 feet, with 21 feet of water on the sills: the estimated cost of this new lock and work of canal deepening is set down at \$4,738,865. For this work an appropriation of \$250,000 was made by Congress in August 1886, and a further appropriation of \$1,000,000 in August, 1888.

From the same report and its appendices it appears that during the fiscal year ended the 30th of June, 1888, the canal was open for 210 days; that 8,823 vessels, etc., passed through, carrying 5,581,169 tons of freight, and 29,494 passengers, the number of lockages being 3,940.

Galops, guard lock.....	8	1
Iroquois, lower entrance.....	9	3
Farran's Point.....	7	9
Cornwall, guard.....	8	3
“ lower entrance.....	9	0
Beauharnois.....	10	10
“ lower entrance.....	9	3

In the year 1871 it was decided to enlarge the canals on the St. Lawrence route so as to afford a navigable depth of 12 feet throughout. Subsequently, however, it was decided that the depth should ultimately be increased so as to accommodate vessels of 14 feet draught; and accordingly in the scheme of enlargement which has so far been carried out, while, at present, a channel-way in the canals is provided for vessels drawing 12 feet only, all permanent structures, locks, bridges, &c., are being built of such proportions as to accommodate vessels of 14 feet draught, the locks being 270 feet long between the gates, 45 feet in width, and with a clear depth of 14 feet of water on the sills.

In view of the interest now being taken in the question of the completion of the scheme of enlarging the St. Lawrence Canals, the following brief *resumé* of matters treated more at length further on, under their proper headings, may be of some use as indicating the works of canal enlargement for a 14 feet navigation so far executed, and those remaining untouched:—

Lachine Canal.—This canal is completed for a 12 feet navigation, with locks, bridges and culverts adapted for a 14 feet navigation. The untouched work consists of the excavation of the canal prism to a further depth of 2 feet for about six out of the eight and a-half miles comprising the canal. About one-half of this excavation would be rock. No work has been carried on during the past year for the deepening of this canal.

Beauharnois Canal.—No enlargement works whatever have been commenced on this canal, but examinations are in progress.

Cornwall Canal.—Here, out of the six new locks required, two locks have been built at the lower end, and are in use, the remaining four, together with the work of enlarging and deepening the entire canal for a 14 feet navigation, are now under contract. Out of the eleven and a-half miles comprising this canal, about ten a-half have a navigable depth of 9 feet only.

Williamsburgh Canal:—

Farran's Point.—No work has been done here. The canal is three-quarters of mile long, with one lock, the navigable depth being 9 feet.

Rapide Plat.—One new lock is completed and in use, leaving one yet to be dealt with. Of the prism of the canal, four miles long, about three-quarters of a mile is completed to the requisite depth for a 14 feet navigation.

Galops Canal.—The approach to the upper entrance has been improved, and a new guard lock and lift lock from the river below the rapids, at a point connecting the upper entrance with the deep water channel, are under contract.

Welland Canal.—The whole of the works, including excavation throughout, are completed, and the present depth of water on the canal accommodates vessels drawing 14 feet.

Besides the above, the channel way of the River St. Lawrence itself, offers, in parts, obstacles to a 14 feet navigation which it would be necessary to remove. Of this work, progress has been made with a certain portion, and that the most difficult and in the shallowest section of the river, namely at the Galops Rapids, through which a channel giving safe passage to vessels drawing 14 feet is now completed. From Cornwall down through Lake St. Francis a channel of sufficient depth for a 14 feet navigation already exists, the improvement of which at a few points, if considered desirable, can be effected at small cost.

LACHINE CANAL.

	Old Line.	New Line.
Length of Canal.....	8½ statute miles.	8½ statute miles.
Number of locks.....	5	5
Dimensions of locks.....	200 feet by 45 feet.	270 feet by 45 feet.
Total rise or lockage.....	45 “	45 “
Depth of water {		
at two locks	16 “	18 “
at three		
on sills..... { locks.....	9 “	14 “
Mean width of new canal.....		150 “

The depth of the canal between locks is adapted to vessels of 12 feet draught.

The canal now consists of one channel, with two distinct systems of locks, the old and the enlarged. There are two entrances at each end.

The new canal having been extended for some distance above the entrance of the old canal, the total rise has been increased from $44\frac{3}{4}$ to 45 feet.

This canal extends from the City of Montreal to the Village of Lachine, overcoming the St. Louis Rapids, the first of the series of rapids which bars the ascent of the River St. Lawrence. They are 986 miles distant from the Straits of Belle-Ile.

The full scheme for the enlargement of this, in common with the other canals of the St. Lawrence, contemplated the affording a navigable depth of 14 feet throughout; the improvement immediately in view, however, was only intended to furnish a navigable depth of 12 feet in the canal proper, and accordingly, on the following reaches, namely, between Lachine and Côte St. Paul, Côte St. Paul and St. Gabriel, and between St. Gabriel and Wellington Basin, the channel has been adapted to navigation by vessels of 12 feet draught only. All permanent works on the canal, such as locks, bridges, side walls and culverts, have been built to afford a navigable depth of 14 feet. Through Lake St. Louis down to the Lachine Canal—a distance of about 15 miles—the existing channel, which is wide and deep, would be available for about 11 miles. Over the lower four miles, however, the channel will require to be deepened and widened at a number of places.

The canal was closed on the 2nd of November, 1888, and opened on the 21st of April, 1889.

Neither delay to vessels nor accident occurred during the year, and the water was maintained at a good height both for navigation and for manufacturing purposes.

The report of the Superintending Engineer gives details of the repairs and new works executed, and shows generally the condition of the canal. (App. p.);

BEAUHARNOIS CANAL.

Length of canal.....	11 $\frac{1}{4}$ statute miles.
Number of locks.....	9
Dimensions of locks.....	200 feet by 45 feet.
Total rise or lockage.....	82 $\frac{1}{2}$ feet.
Depth of water on sills	9 "
Breadth of canal on bottom	80 "
Breadth of canal at water surface	120 "

This canal commences on the south side of the St. Lawrence, 15 $\frac{1}{4}$ miles from the head of the Lachine Canal. It connects Lakes St. Louis and St. Francis, and passes the three rapids known respectively as the Cascades, the Cedars, and the Coteau.

The canal was closed on the 1st of December, 1888, and was re-opened for traffic on the 17th of April, 1889.

No accident or interruption to navigation occurred during the year.

Nothing has been done towards the enlargement of this canal. (App. 8, p. 98.)

CORNWALL CANAL.

Length of canal.....	11 $\frac{1}{2}$ statute miles.
Number of locks.....	6
Dimensions of locks (four).....	200 feet by 45 feet.
" of two lower entrance locks.....	270 by 45
Total rise or lockage	48 feet.
Depth of water on sills	9 "
" " at the two lower entrance locks	14 "
Breadth of canal at bottom (except at two culverts).....	100 "
Breadth of canal at water surface	150 "

From the head of the Beauharnois to the foot of the Cornwall Canal, there is a navigable stretch through Lake St. Francis of 32 $\frac{3}{4}$ miles.

The Cornwall Canal extends past the Long Sault Rapids.

This canal was closed on the 26th of December, 1888, and re-opened on the 22nd of April, 1889.

On the evening of the 11th of October, 1888, a serious break occurred in the south bank of this canal, between Mille Roches and Moulinette, the breach made being of a mean length of about 300 feet. The re-formation of the bank proved to be a matter of considerable difficulty and cost, owing not only to the extent of the damage done but to the exceptionally wet character of the weather, which retarded operations. The navigation was, in consequence, delayed until the 11th of November. A further delay of two days was caused by the displacement of the gates of one of the works on the 17th of that month. (See appendix 7. page 93.)

NEW WORKS.

The two locks at the new lower entrance (taking the place of three on the old line), were in constant use during the season of navigation. The dimensions of the new locks are those of the general enlargement scheme, namely: Length, 270 feet; breadth, 45 feet; depth of water, 14 feet. The basin between these two locks is 825 feet long.

The four locks still to be dealt with are all under contract, together with supply weirs and bridges; also the work of deepening and enlarging the prism of the canal.

The proposed channel will be sunk to such depth as to admit of the passage of vessels of 14 feet draught.

The works at the upper end of the canal consists of the widening and deepening of the channel-way and the construction of a lock and a large regulating weir. It is expected all that these works will be completed by the opening of navigation in 1891. These and all the other works are described in detail in an appendix of the present report. (See appendix 7. page 94.)

WILLIAMSBURGH CANALS.

The Farren's Point, Rapide Plat, and Galops Canals are collectively known as the Williamsburgh Canals.

These canals were closed on the 10th of December, 1888, and re-opened on the 22nd of April, 1889.

They have been maintained in good repair through the season. (See Appendix 8 p. 91).

FARRAN'S POINT CANAL.

Length of canal	$\frac{3}{4}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise, or lockage	4 feet.
Depth of water on sills at ordinary water level.	9 "
Breadth of canal at bottom.....	50 "
Breadth of canal on water surface.....	90 "

From the head of the Cornwall Canal to the foot of Farran's Point Canal the distance on the River St. Lawrence is 5 miles. The latter canal enables vessels ascending the river to avoid the Farran's Point Rapid. Descending vessels run the rapids with ease and safety.

No steps have been taken for the enlargement of this canal.

RAPIDE PLAT CANAL.

Length of canal.....	4 miles
Number of locks.....	2
Dimensions of locks.....	200 feet by 45 feet.
Total rise, or lockage.....	11½ feet.
Depth of water on sills.....	9 “
Breadth of canal at bottom.....	50 “
Breadth of canal at surface of water.....	90 “

From the head of Farran's Point Canal to the foot of Rapide Plat Canal there is a navigable stretch of 10½ miles. This canal was formed to enable vessels ascending the river to pass the rapid at that place. Descending vessels run the rapid safely.

NEW WORKS.

The enlargement of this canal in conformity with the proportions of the general scheme has been commenced. The works consist of the enlargement of the channel way above and for some distance below the present guard lock at the head of the canal, and the construction of a new lock and a supply weir in connection with the old lock. The bottom of the channel, for a distance of about 1,000 feet below, and out into deep water, above the lock, about 700 feet, has been excavated to an extent sufficient to afford a navigable depth of 14 feet. The new lock is completed and in operation, and the remaining works in that connection are well advanced. Arrangements are in progress for the enlargement of the lower portion of the canal, consisting of the prism and lock at the canal outlet.

GALOPS CANAL.

Length of canal.....	7½ miles.
Number of locks.....	3
Dimensions of locks.....	200 feet by 45 feet.
Total rise, or lockage.....	15¾ feet.
Depth of water on sills.....	9 “
Breadth of canal at bottom.....	50 “
Breadth of canal at surface of water.....	90 “

From the head of Rapide Plat Canal to Iroquois, at the foot of the Galops Canal, the St. Lawrence is navigable for 4½ miles. This canal enables vessels to overcome the rapids at Pointe aux Iroquois, Pointe Cardinal and the Galops.

NEW WORKS.

The excavation and deepening of a channel way at the upper end, leading to deep water, so as to give a depth available for vessels of 14 feet draught is completed, as was reported last year, and consequently access to this canal is found to be greatly facilitated. The extension of the 14 feet navigation down to deep water below the rapids, placing a guard lock at that point, and the construction of a lift lock to the river remain to be executed. These works are under contract.

GALOPS RAPIDS IMPROVEMENT.

The Galops Rapids, about seven miles below Prescott, the most shallow of the three passed by the Galops Canal, have been improved for purposes of navigation by certain works of submarine blasting and dredging.

These works, commenced in 1880, consist of the excavation of a straight channel through the rapids, 3,300 feet long, 200 feet wide, and of such depth as to afford safe passage at low water to vessels of 14 feet draught. This implies affording a depth of 17 feet of water.

The whole of these works have been completed.

WELLAND CANAL.

MAIN LINE, FROM PORT DALHOUSIE, LAKE ONTARIO, TO PORT COLBORNE,
LAKE ERIE.

By the works of enlargement, passage is now afforded, at all stages of the Lake Erie level, to vessels drawing 14 feet of water.

	Old Line.	Enlarged or New Line.
Length of Canal.....	27 $\frac{1}{5}$ miles.	26 $\frac{3}{4}$ miles.
Pairs of guard gates (formerly 3).....		2
Number of locks { lift.....	26	} lift 25 guard 1
{ guard.....	1	
Dimensions.	{ 1 lock 200 x 45 1 " 200 x 45 1 tidal) 230 x 45 24 150 x 26 $\frac{1}{2}$	} 270 feet x 45 feet.
Total rise or lockage.....		
	326 $\frac{3}{4}$ feet.	326 $\frac{3}{4}$ feet.
Depth of water on sills.....	10 $\frac{1}{4}$ "	14 "

WELLAND RIVER BRANCHES.

Length of Canal—Port Robinson Cut to River	
Welland.....	2,622 feet.
" From the Canal at Welland to the river, <i>via</i> lock at aqueduct.....	300 "
" Chippewa Cut to River Niagara.....	1,020 "

Number of locks—One at aqueduct and one at Port Robinson.....	2 “
Dimensions of locks.....	150 by 26½ feet.
Total lockage from the Canal at Welland down to River Welland.....	10 feet.
Depth of water on sills.....	9 “ 10 inches.

GRAND RIVER FEEDER.

Length of canal.....	21 miles.
Number of locks.....	2
Dimensions of locks.....	{ 1 of 150 by 26½ feet. 1 of 200 by 45 “
Total rise, or lockage.....	7 to 8 feet.
Depth of water on sills.....	9 feet.

PORT MAITLAND BRANCH.

Length of canal.....	1¾ miles.
Number of locks.....	1
Dimensions of locks.....	185 by 45 feet.
Total rise, or lockage.....	7½ feet.
Depth of water on sills.....	11 “

The Welland Canal has one entrance from Lake Ontario, at Port Dalhousie, serving for both the old and new canals, and two from Lake Erie, of which one is for the main line at Port Colborne, and one for the feeder route at Port Maitland ; it has also an entrance from the River Niagara, at the town of Chippewa. The enlarged route lies between Port Dalhousie and Port Colborne.

From Port Dalhousie to Allanburgh, 11¾ miles, there are now two distinct lines of canal in operation, the old line, and the enlarged, or new line.

From Allanburgh to Port Colborne, a distance of 15 miles, there is only one channel, the old canal having been enlarged.

The canal was opened in 1883 for vessels drawing 12 feet of water, and in May 1887, for vessels drawing 14 feet

The main line of the canal was closed to navigation on the 1st of December, 1888, and re-opened on the 16th of April, 1889, the old route being re-opened on the 1st of May.

Certain casualties have occurred during the year. The propellor “Escanaba” on the 3rd of May, 1889, carried away the head gates of one of the locks, causing a delay of 44 hours. On the 29th of July the steamer “Haskell” struck the head gates of another lock, thereby causing the displacement and almost the total destruction of three of its gates ; also damage to the canal banks and injury to lands below, through the sudden rush of water. This accident caused a delay of 39 hours.

On the 9th of January, 1889, a violent westerly storm raised the waters of Lake Erie to an unusual height, and resulted in serious damage. The same storm did great damage to the pier works at the entrance to the Port Colborne harbour, and also damaged the piers at Port Maitland.

As showing the extent to which the water level of Lake Erie is affected by the prevalent wind, it may be observed that at the time of the storm of the 9th of January, the wind being westerly, the level at Port Colborne was fully 7 feet above the assumed low water line while at the close of the month of May, and beginning of June it was reduced by continuous easterly winds to fully 1 foot below any previously observed level, or 18 inches below the assumed low water line, the variation, in the two levels being $8\frac{1}{2}$ feet. The lowness of the water caused, on the 3rd June, a delay of several hours.

The waters of both Lake Erie and Lake Ontario were unusually low during the season, and consequently vessels drawing 16 feet of water experienced difficulty under certain conditions of the wind in getting out of the harbour of Port Dalhousie, the channel at the entrance having been greatly reduced owing to the drifting in of sand through the western pier. The remedies now being applied have in view the removal of the cause, and the difficulty will, it is expected, cease next season.

The experiment made in 1888 of substituting concrete for wood in the superstructure of the piers at this point appears to be successful.

All the works on the canal have been efficiently maintained.

The traffic on the main line, during the season, was approximately about one-third greater than that of any season for the past three years. (App. 7, p. 87.)

MONTREAL, OTTAWA AND KINGSTON.

This route extends from the harbour of Montreal to the port of Kingston, passing through the Lachine Canal, the navigation section of the lower River Ottawa, and the Ottawa River Canals, to the City of Ottawa; thence by the River Rideau and the Rideau Canal to Kingston, on Lake Ontario—a total distance of $245\frac{1}{2}$ miles.

After leaving the Lachine Canal, the works constructed to overcome difficulties of navigation are:—

The St. Anne's Lock; }
Carillon Canal; } Ottawa River Canals.
Grenville Canal; }
Rideau Canal;

The total lockage (not including that of the Lachine Canal), is 509 feet—(345 rise, 164 fall)—and the number of locks is 55.

The following table exhibits the intermediate distance from Montreal Harbour:—

Sections of Navigation.	Intermediate Distance.	Total Distance from Montreal.
	Miles.	Miles.
The Lachine Canal.....	$8\frac{1}{2}$	
From Lachine to Ste. Anne's Lock.....	15	$23\frac{1}{2}$
Ste. Anne's Lock and Piers.....	$\frac{1}{8}$	23
From Ste. Anne's Lock to Carillon Canal.....	27	50
The Carillon Canal.....	$\frac{3}{4}$	51
From Carillon Canal to Grenville Canal.....	$6\frac{1}{4}$	57
The Grenville Canal.....	$\frac{3}{4}$	63
From the Grenville Canal to entrance Rideau Navigation...	56	119
Rideau Navigation, ending at Kingston.....	$126\frac{1}{4}$	$245\frac{1}{2}$

STE. ANNE'S LOCK.

	Old Lock.	New Lock.
Length of canal.....	$\frac{1}{8}$ mile.	$\frac{1}{8}$ mile.
Number of locks.....	1	1
Dimensions of lock.....	190 by 45 feet.	200 by 45 feet.
Total rise, or lockage.....	3 feet.	3 feet.
Depth of water on sills.....	6 "	9 "

This work, with guide piers above and below, surmounts the Ste. Anne's Rapids between Ile Perrot and the head of the Island of Montreal, at the outlet of that portion of the Ottawa River which forms the Lake of Two Mountains, $23\frac{1}{2}$ miles from Montreal Harbour.

This lock was closed to navigation on the 22nd November, 1888, and re-opened on the 19th of May, 1889.

Navigation has been conducted without interruption or accident during the year.

Both the old and the new locks are available. (App. 9, p. 114.)

THE CARILLON CANAL.

Length of canal.....	$\frac{3}{4}$ mile.
Number of locks.....	2
Dimensions of locks.....	200 by 45 feet.
Total rise, or lockage.....	16 feet.
Depth of water on sills.....	9 "
Breadth of canal at bottom.....	100 "
Breadth of canal at water surface.....	110 "

This canal overcomes the Carillon Rapids.

From Ste. Anne's Lock to the foot of the Carillon Canal there is a navigable stretch of 27 miles, through the Lake of Two Mountains and the River Ottawa.

The canal was closed on the 2nd December, 1888, and re-opened on the 26th of April, 1889.

No interruption to traffic has taken place. (App. 9, p. 114.)

By the construction of the Carillon dam, the water at that point has been raised 9 feet. Above this point, for a distance of nearly 7 miles, as far as the foot of Grenville Canal, the level of the river has been raised, and, consequently, the depth of water on the lower sill of the entrance lock of that canal has been increased, and the necessity of using the Chute à Blondeau Canal, situated between these points, is obviated.

GRENVILLE CANAL.

Length of canal.....	$5\frac{3}{4}$ miles.
Number of locks.....	5
Dimensions of locks.....	200 feet by 45 feet.
Total rise, or lockage.....	$43\frac{3}{4}$ feet.
Depth of water on sills.....	9 "
Breadth of canal at bottom.....	40 to 50 feet.
Breadth of canal at surface of water.....	50 to 80 feet.

From the head of the Carillon Canal to the foot of the Grenville Canal there is a navigable stretch of $5\frac{1}{2}$ miles.

This canal, by which the Long Sault Rapids are avoided, is about 56 miles below the City of Ottawa.

The canal was closed on the 2nd of December, 1888, and re-opened on the 26th of April, 1889. (*See App. 9, p. 114.*)

UPPER OTTAWA RIVER.

CULBUTE LOCKS AND DAMS.

Number of locks.....	2
Dimensions of locks.....	200 by 45 feet.
Total rise, or lockage.....	18 to 20 “
Depth of water on sills.....	5 “
Aggregate length of dams.....	625 “

From the Grenville Canal to the city of Ottawa, a distance of about 56 miles, the river is navigable. Beyond the city, for a distance of 107 miles, to L'Islet or Culbute, continuous navigation is rendered impracticable by the undermentioned rapids:—

The Chaudière, the Des Chenes, the Chats, the Chenaux, the Portage du Fort and the Grand Calumet.

The Culbute works, situated at L'Islet, surmount the Culbute and L'Islet Rapids on the north channel of the Ottawa.

These works comprise two locks and three continuous dams, all built of wood. The dams reduce the rapids to smooth water, enabling the river to be navigated from the head of the locks to Des Joachims, a distance of 37 miles.

There is a navigation route of 80 miles with a minimum depth of 7 feet at extreme low water, between Des Joachims and Bryson; making a total above and below Culbute of 117 miles. (*App. 9, p. 115.*)

In view of the fact that the locks on this canal were built of wood, and are much decayed; that in order to make these works permanently effective considerable cost would be entailed, while, on the other hand, the traffic is of but insignificant extent, the presence of railway facilities having greatly lessened the anticipated usefulness of the work, it has been decided to abandon the idea of maintaining the water at an abnormal height, and an Order in Council has been passed on the 24th of October, 1889, to the effect that the river should be allowed to resume its natural level, one which, save at special seasons, admits of navigation.

RIDEAU NAVIGATION.

The Rideau system connects the River Ottawa, at the city of Ottawa, with the eastern end of Lake Ontario, at Kingston.

Length of navigation waters.....	126 $\frac{1}{4}$ miles.
Number of locks going from Ottawa to Kingston.	{ 33 ascending
	{ 14 descending.

Total lockage.....	446 $\frac{1}{4}$	$\left\{ \begin{array}{l} 282\frac{1}{4} \text{ rise and} \\ 164 \text{ fall.} \end{array} \right\}$	at high water.
Dimensions of locks.....			134 by 33 feet.
Depth of water on sills, 5 feet; navigable depth through the several reaches.....			4 $\frac{1}{2}$ feet.
Breadth of canal reaches at bottom.....		$\left\{ \begin{array}{l} 60 \text{ " in earth.} \\ 54 \text{ " in rock.} \end{array} \right\}$	
Breadth at surface of water.....			80 " in earth.

The summit level of this system is at Upper Lake Rideau, but several of the descending reaches are also supplied by waters which have been made tributary to them. The following description gives the sources of supply:

From the summit, the route towards Ottawa follows the River Rideau, and that towards Kingston follows the River Cataraqui. The supply of water for the canal is derived from the reserves given in detail below.

These may be divided into three systems, viz:—

1. The summit level, supplied by the Wolfe Lake system. 2. The eastern descending level to Ottawa, supplied by the River Tay system, discharging into Lake Rideau. 3. The south-west descending level to Kingston, supplied by the Mud Lake system, formerly known as the Devil Lake system, discharging into Lake Openacon.

Lake Openacon receives the waters of Buck Lake and Rock Lake.

All these waters on the descending level, supplemented by those of Lake Loughboro', flow into Cranberry Lake, which, discharging through Round Tail outlet, forms the River Cataraqui. This river, rendered navigable by dams at various points, affords a line of navigation to Kingston.

The navigation stopped at Ottawa on the 22nd and at Kingston Mills on the 3rd of November, 1888, and recommenced at Ottawa on the 22nd and at Kingston Mills on the 23rd of April, 1889.

On the reaches descending from the summit towards Ottawa the water was maintained up to the close of navigation at the full depth required, but on those descending towards Kingston the water fell early in July, and continued below the proper height until at Newboro' at the close of navigation, it stood one foot below the ordnance standard.

The spring freshets this year were of no importance.

Navigation throughout the year was uninterrupted.

The continuous spring rains, however, rendered it necessary for the first time in 20 years to leave the waste weir open until the end of July. (App. 10, p. 116.)

TAY CANAL.

Length of canal.....	6 miles.
Number of locks.....	2
Dimensions of locks.....	134 feet by 32 feet.
Total rise or lockage	26 feet.

For table of distances of stations between Ottawa and Kingston, see Appendix 15, p. 124.

Depth of water on sills.....	5 feet 6 inches.
Length of dam.....	200 feet.
Breadth of canal at bottom	40 feet.
Breadth of canal at surface of water.....	{ 40 feet in rock. 64 feet in clay.

This canal is a branch of the Rideau Canal, affording communication between Beveridge's Bay, on Lake Rideau, and the town of Perth.

Certain work still remained to be executed at the close of the fiscal year in the way of basin construction and deepening, but the canal was used by steamers during the season at the risk of the owners. (App. 11, p. 119).

RICHELIEU AND LAKE CHAMPLAIN.

This system, commencing at Sorel, at the confluence of the Rivers St. Lawrence and Richelieu, 46 miles below Montreal, extends along the River Richelieu through the St. Ours Lock to the Basin of Chambly, thence by the Chambly Canal to St. Johns and the River Richelieu to Lake Champlain. The distance from Sorel to the boundary line is 81 miles.

At Whitehall, the southern end of Lake Champlain, the Champlain Canal is entered, and connection is obtained with the River Hudson, by which the city of New York is directly reached. From the boundary line to New York the distance is 330 miles.

The following table shows the distance between Sorel and New York.—

Sections of Navigation.	Intermediate Distance in miles.	Total Distances.
Sorel to St. Ours Lock.....	14	14
St. Ours Lock to Chambly Canal.....	32	46
Chambly Canal	12	58
Chambly Canal to Boundary Line.....	23	81
Boundary Line to Champlain Canal	111	192
Champlain Canal to Junction with Erie Canal.....	66	258
Erie Canal from Junction to Albany.....	7	265
Albany to New York	146	411

ST. OURS LOCK AND DAM.

Length of canal.....	$\frac{1}{8}$ mile.
Number of locks.....	1
Dimensions of lock.....	200 feet by 45 feet.
Total rise, or lockage.....	5 “
Depth of water on sills.....	7 “ at low water.
Length of dam in eastern channel.....	300 “
“ “ western channel.....	690 “

At St. Ours, fourteen miles from Sorel, the River Richelieu is divided by a small island into two channels. The St. Ours Lock is the eastern channel.

There is a navigable depth of 7 feet between St. Ours Lock and Chambly Basin, a distance of thirty-two miles.

Navigation closed on the 24th of November, 1888, and re-opened on the 19th of April, 1889.

This lock was constructed in 1849, and has for some years been in bad condition. It has been carefully examined, with a view to its repair. (See Appendix 8, p. 101; also Appendix 8*b*, p. 109.)

CHAMBLY CANAL.

Length of canal.....	12 miles
Number of locks.....	9
Dimensions of locks :—	
Guard Lock, No. 1, at St. Johns.....	122 feet
Lift “ “ 2.....	124 “
“ “ “ 3, 4, 5, 6.....	118 “
“ “ “ 7, 8, 9 combined.....	125 “
Total rise, or lockage.....	74 “
Depth of water on sills.....	7 “
Breadth of canal at bottom.....	36 “
“ “ surface of water.....	60 “

This canal succeeds the 32 miles of navigable water between St. Ours Lock and Chambly Basin—a natural reservoir formed by the expansion of the River Richelieu. This canal overcomes the rapids between Chambly and St. Johns.

The canal was closed to navigation on the 22nd of December, 1888, and was re-opened on the 29th of April, 1889.

Navigation was conducted without accident or detention.

In addition to ordinary repairs, various improvements have been made, chargeable to income, including the deepening of the canal entrance at St. Johns and the excavation of passing places for vessels. (See App. 8, p. 100; also App. 8*a*, p. 107.)

A survey was made, with a view to a diversion of the sewerage of the town of St. Johns from the canal, into which it is at present emptied, to the River Richelieu, by means of a collecting drain under the canal.

RIVER RICHELIEU.

The work of surveying the River Richelieu was continued, the portion surveyed being that between Ile Ste. Thérèse and Chambly, a distance of about six miles. (See app. 8a, p. 107.)

ST. PETER'S CANAL, CAPE BRETON.

Length of canal.....	About 2,400 feet.
Breadth at water line.	55 feet.
Lock.....	One tidal lock, 4 pairs of gates.
Dimensions	200 feet by 48 feet.
Depth of water on sills.....	18 " at lowest water.
Depth through canal.....	19 "
Extreme rise and fall of tide in St. Peter's Bay.....	4 "

This canal connects St. Peter's Bay, on the southern side of Cape Breton, Nova Scotia, with the Bras d'Or Lakes. It crosses an isthmus half a mile in width, and gives access from the Atlantic.

Navigation was closed on the 6th of January, 1889, and re-opened on the 23rd of March.

The works of the canal are in good order, with the exception of the retaining wall of the western side of the canal, which is in bad condition. It was not, however, considered advisable to touch this wall at present. The traffic returns show the passage of 1,203 vessels bound north, and 1,014 vessels bound south. (App. 13, p. 122.)

TRENT RIVER NAVIGATION.

The term "Trent River Navigation" is applied to a series of water stretches, which do not, however, form a connected system of navigation, and which, in their present condition, are efficient only for local use.

This series is composed of a chain of lakes and rivers, extending from Trenton, at the mouth of the Trent, on the Bay of Quinté, Lake Ontario, to Lake Huron.

Many years ago the utilizing of these waters for the purpose of through water communication between Lake Huron and Lake Ontario was projected.

The course in contemplation was as follows:—

Through the River Trent, Rice Lake, the River Otonabee and Lakes Clear, Buckhorn, Chemong, Pigeon, Sturgeon and Cameron to Lake Balsam, the summit water, about 165 miles from Trenton; from Lake Balsam by a canal and the River Talbot to Lake Simcoe; thence by the River Severn to Georgian Bay, Lake Huron, the total distance being about 235 miles.

The execution of this scheme, commenced in 1837, was subsequently deferred. By certain works, however, below specified, sections of these waters were made practicable for navigation and for the passage of timber. A branch of the main

course, extending from Sturgeon Lake south, affords communication with the town of Lindsay, and through Lake Seugog to Port Perry, a distance of 190 miles from Trenton.

The following table gives the distance of navigable and unnavigable reaches :

	Navigable Miles.	Unnavigable Miles.
From Trenton, Bay of Quinté, to Nine Mile Rapids....		9
“ Nine Mile Rapids to Percy Landing.....	19½	
“ Percy Landing to Heely's Fall Dam.....		14¼
“ Heeley's Fall Dam to Peterboro'.....	51¾	
“ Peterboro' to Lakefield.....		9½
“ Lakefield to a point across Balsam Lake.....	61	
	<hr/> 132¼	<hr/> 32¾
Total distance, Bay of Quinté to Balsam Lake.....		165
From Sturgeon Point on Sturgeon Lake, 48¾ miles from Lakefield, the branch through the town of Lindsay to Port Perry at the head of Lake Seugog.....	27½	

The following is a list of the works :—

MAIN LINE FROM TRENTON TO BALSAM LAKE.

Chisholm's Rapids.

	Distance from Trenton in miles.
The work here consists of a canal and lock, a dam and slide.	15½

Percy Landing.

A retaining boom for saw logs.....	28½
------------------------------------	-----

Campbellford.

Guide booms.....	34¾
------------------	-----

Middle Falls.

The work consists of 4 dams and 2 slides.....	37¾
---	-----

Crow Bay.

A retaining boom.....	38
-----------------------	----

Heeley's Falls.

A dam and slide.....	42¾
----------------------	-----

Crook's Rapids, Hastings.

The works consist of 1 lock, 1 dam and slide for timber.....	56½
--	-----

Whitlas' Rapids.

The works, situated below Peterboro', consist of a lock, dam and canal.....	92¾
--	-----

Peterboro'.

The works consist of 3 piers and 1 boom.....	94
--	----

Lakefield.

The works consist of a dam and wharf.....	103½
---	------

Young's Point.

One lock (a Provincial Government work) and dam.....	108½
--	------

Burleigh.

Timber slides, 2 dams, 2 locks (new).....	118
---	-----

Lovesick Rapids.

One lock and dam.....	119½
-----------------------	------

Buckhorn Rapids.

There is a dam at this point, which is important as keeping up the level of the water of the lakes west of it, as far as Bobcaygeon, including Lakes Pigeon, Buckhorn and Chemong, 1 lock, 1 slide (new works).....	125
---	-----

Bobcaygeon.

There are 2 dams here with canal, lock and slide. These dams retain the waters of the reach as far as Fenelon Falls and Lindsay Lock.....	140¾
---	------

Fenelon Falls.

A large slide and booms, 2 combined locks (new).....	154¾
--	------

Rosedale.

An old lock maintained by the Ontario Government, giving entrance from Cameron's Lake to Balsam Lake.....	162¾
---	------

BRANCH FROM STURGEON LAKE TO LAKE SCUGOG.

Lindsay.

One lock, rebuilt by the Government of the Province of Ontario in 1879. Its dimensions are 134 x 33 feet, with 5 feet of water on the sills.....	161¼
The navigation is, by this work, extended to Port Perry, Lake Scugog.....	190

The water on the several reaches was maintained at a good height, there being between 5 feet 6 inches and 6 feet of water on the sills till near the close of navigation.

The number of lockages on the several canals was 2,814, as against 1,140 vessels passed during the season of 1887-88.

Navigation ceased on the 22nd of November, 1888, and re-opened on the 17th of April, 1889.

NEW WORKS.

The new works for the improvement of the Trent Valley navigation, are at the following places :—Canals, with locks and bridges, at Burleigh Rapids, Buckhorn Rapids and Fenelon Falls; also dams at Lakefield and Young's Point. By these works, which are now all completed, there is afforded communication between Lakefield, $9\frac{1}{2}$ miles from Peterboro', and Balsam Lake, the headwaters of the system; opening up of a total of about 160 miles of direct and lateral navigation.

At Lakefield, $9\frac{1}{2}$ miles from Peterboro', the new dam, at the head of the Nine Mile Rapids of the River Otonabee, which maintains navigation on Lake Katchewanoe up to Young's Point, was completed during the fiscal year 1886–87.

At Young's Point, 5 miles from Wakefield, the new dam between Lake Katchewanoe and Clear Lake controls the water level through Clear and Stony Lakes up to the foot of the Burleigh Canal. The lock here, it should be observed, is controlled by the Provincial Government.

At Burleigh Rapids, 10 miles from Young's Point, a canal, about $2\frac{1}{4}$ miles in length, passes the Burleigh and Lovesick Rapids, and gives communication between Stony Lake and Deer Bay; it comprises three lift locks and certain dams.

At Buckhorn Rapids, 7 miles from Burleigh Rapids, a canal of about one-fourth of a mile long has been constructed, having one lift lock.

At Bobcaygeon, $15\frac{3}{4}$ miles from Buckhorn Rapids, the new dam, 553 feet long, taking the place of two old ones, is now completed, together with a dry dock formed by the extension of two piers of the dam. By this work the water level is controlled up to Fenelon Falls.

At Fenelon Falls, 15 miles from Bobcaygeon, a canal about one-third of a mile in length, with two lift locks, was constructed in 1885, connecting Sturgeon Lake with Cameron Lake.

In all the above named works the locks are of the following dimensions :—

Length.....	134 feet.
Breadth.....	33 “
Depth of water on the mitre sills.....	5 “

(App. 12, p. 120.)

MURRAY CANAL.

Length between eastern and western pier heads.....	$5\frac{1}{8}$ miles.
Breadth at bottom.....	80 feet.
Depth below lowest known lake level.....	11 “
No locks.	

This canal extends through the Isthmus of Murray, giving connection westward between the headwaters of the Bay of Quinté and Lake Ontario.

The works on this canal comprise a cut through the isthmus $4\frac{1}{4}$ miles long, and improvements in the way of dredging and other work to the entrance channels at either end, covering a total distance of $9\frac{1}{2}$ miles in all.

Its western terminus is near the village of Brighton in the harbour of Presqu'Île, from which point to Port Dalhousie, the entrance of the Welland Canal, the distance is about 120 miles.

The new entrance from the lake to Presqu'Île harbour, has a width varying from 1000 feet outside the main light, to 200 feet at the entrance to the channel. The maximum depth is 16 feet. (App. 7, p. 91.)

SAULT STE. MARIE CANAL.

This canal is being constructed on the Canadian side of the River St. Mary between Lakes Huron and Superior, being formed through St. Mary's Island on the north side of the rapids.

At ordinary stages of the river water there is a difference of 18 feet in the levels of the water above and below this island. The distance across the island, is about two thirds of a mile. The canal will have a mean width of 150 feet and a depth of 18 feet below the lowest known water line of that part of the river. The difference in level will be overcome by one lock 600 feet in length and 85 feet in width, having guard gates at both ends facing in opposite directions.

These gates are to be worked by "Hydraulic power," the water being admitted or withdrawn at the floor of the lock.

The works, including both those for the lock and the canal, are under contract ; also the entrance channels at both ends.

The contracts require the whole to be completed and ready for use in May, 1892.

COMMISSION ON THE TRENT NAVIGATION.

In view of the interest taken in the scheme for connecting the waters of the Bay of Quinté, Lake Ontario, with those of Georgian Bay, Lake Huron, it was thought advisable that the matter should receive investigation at the present time; and accordingly an Order in Council was passed on the 8th of October, 1887, authorizing the appointment of a Commission of Enquiry to examine and report on the question of the expediency of extending the Trent Valley navigation. The Commission was constituted accordingly. It has not yet reported.

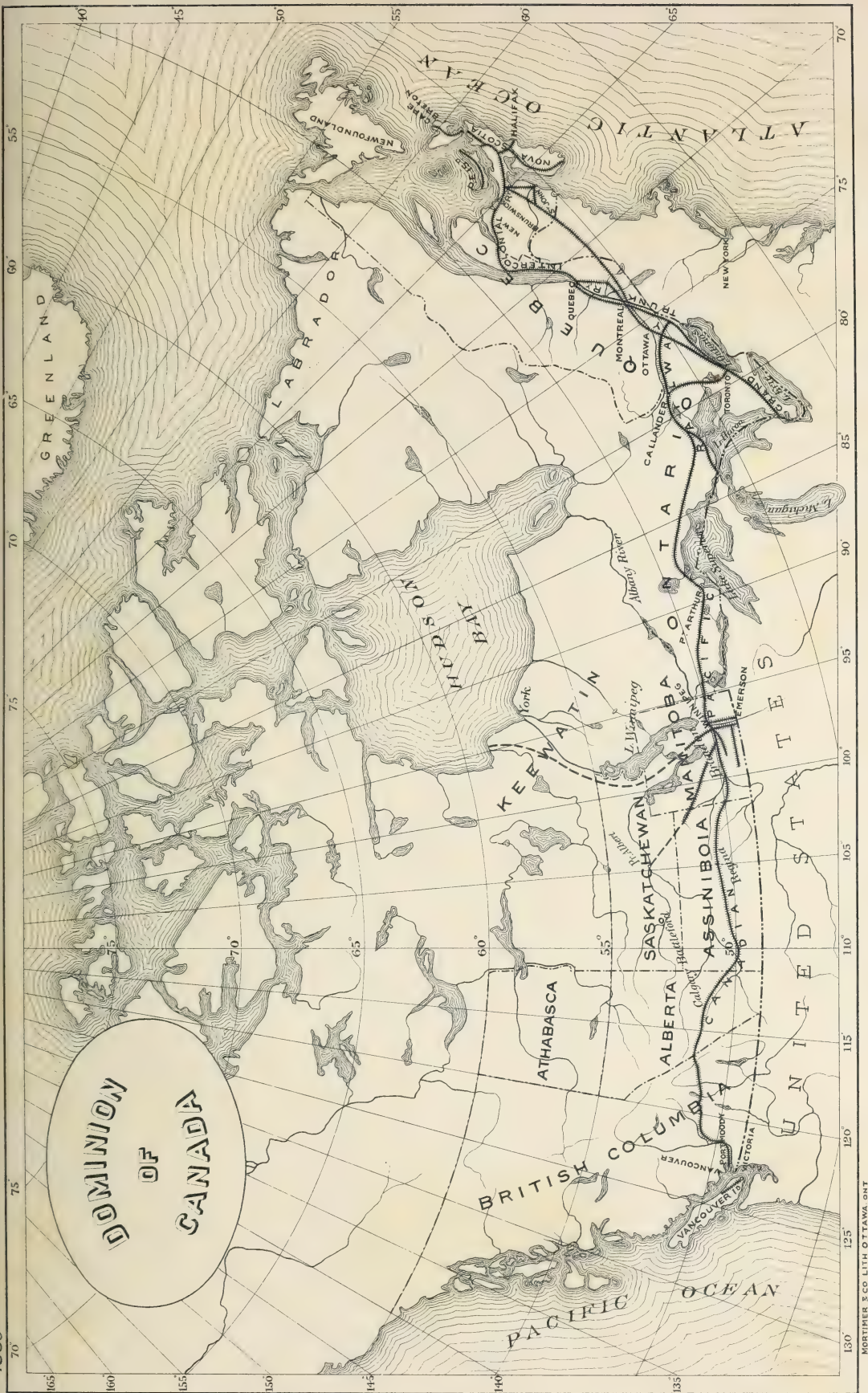
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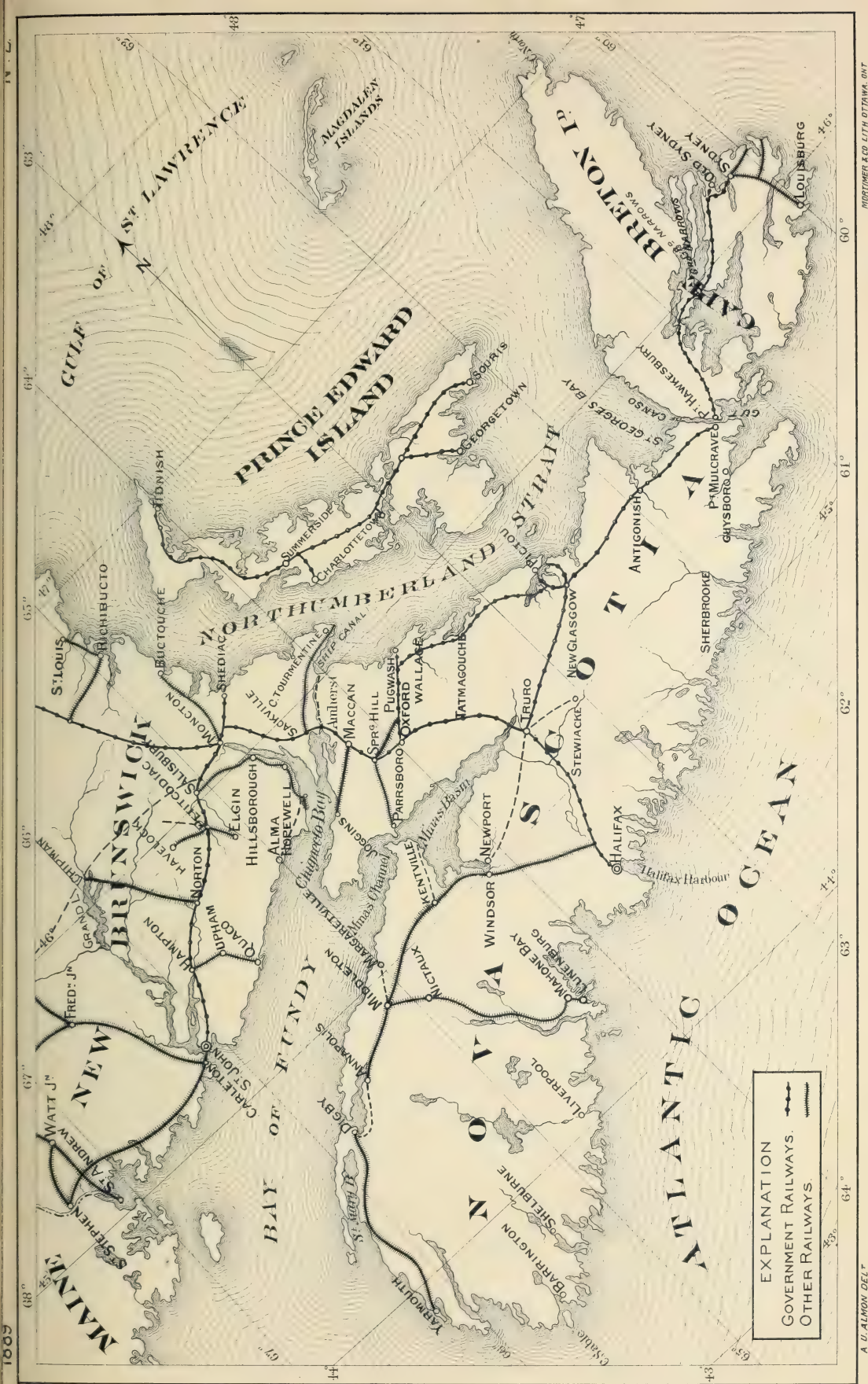
Your Excellency's most obedient servant,

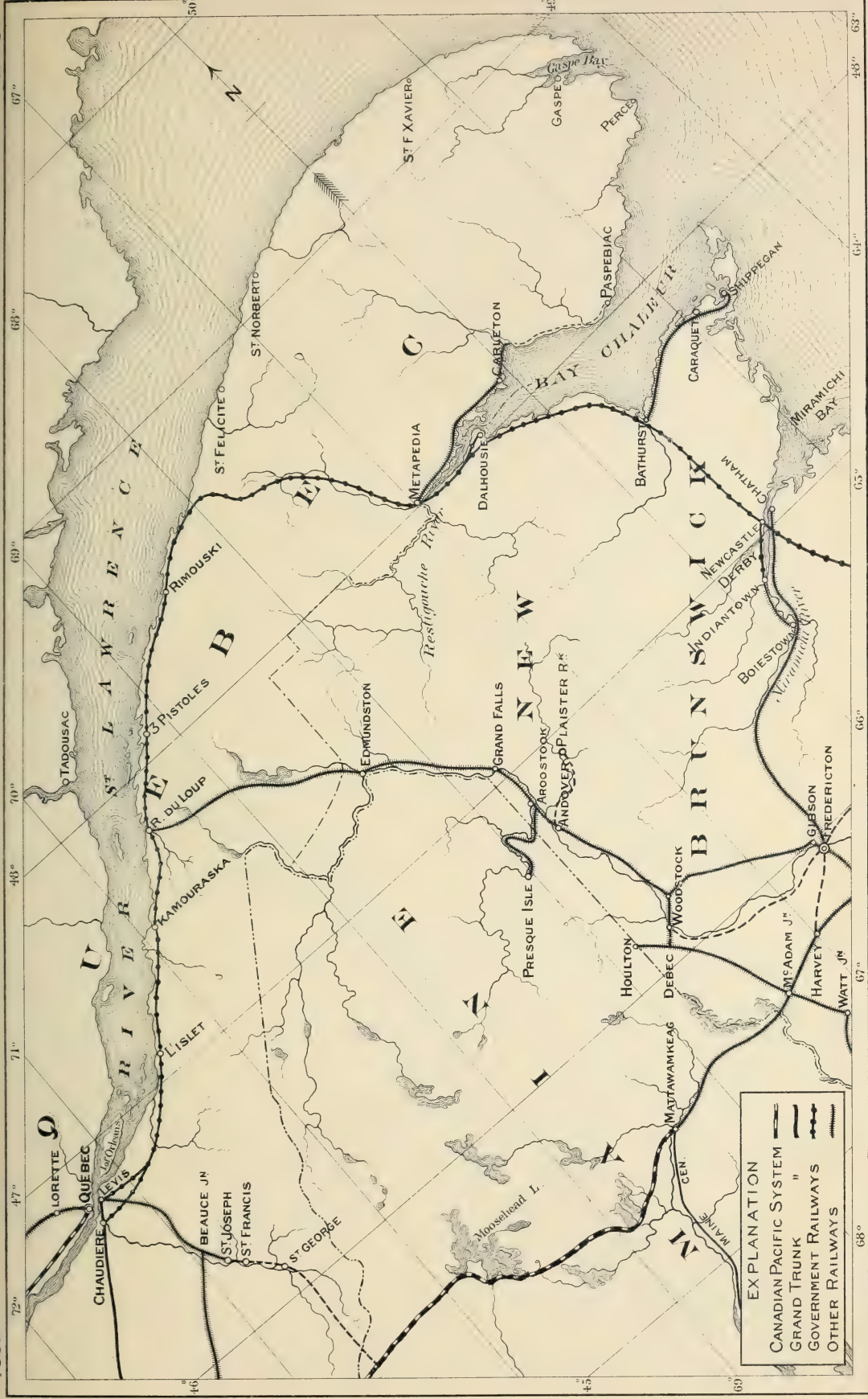
JOHN A. MACDONALD,

Minister of Railways and Canals.

31st December, 1889.

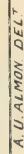


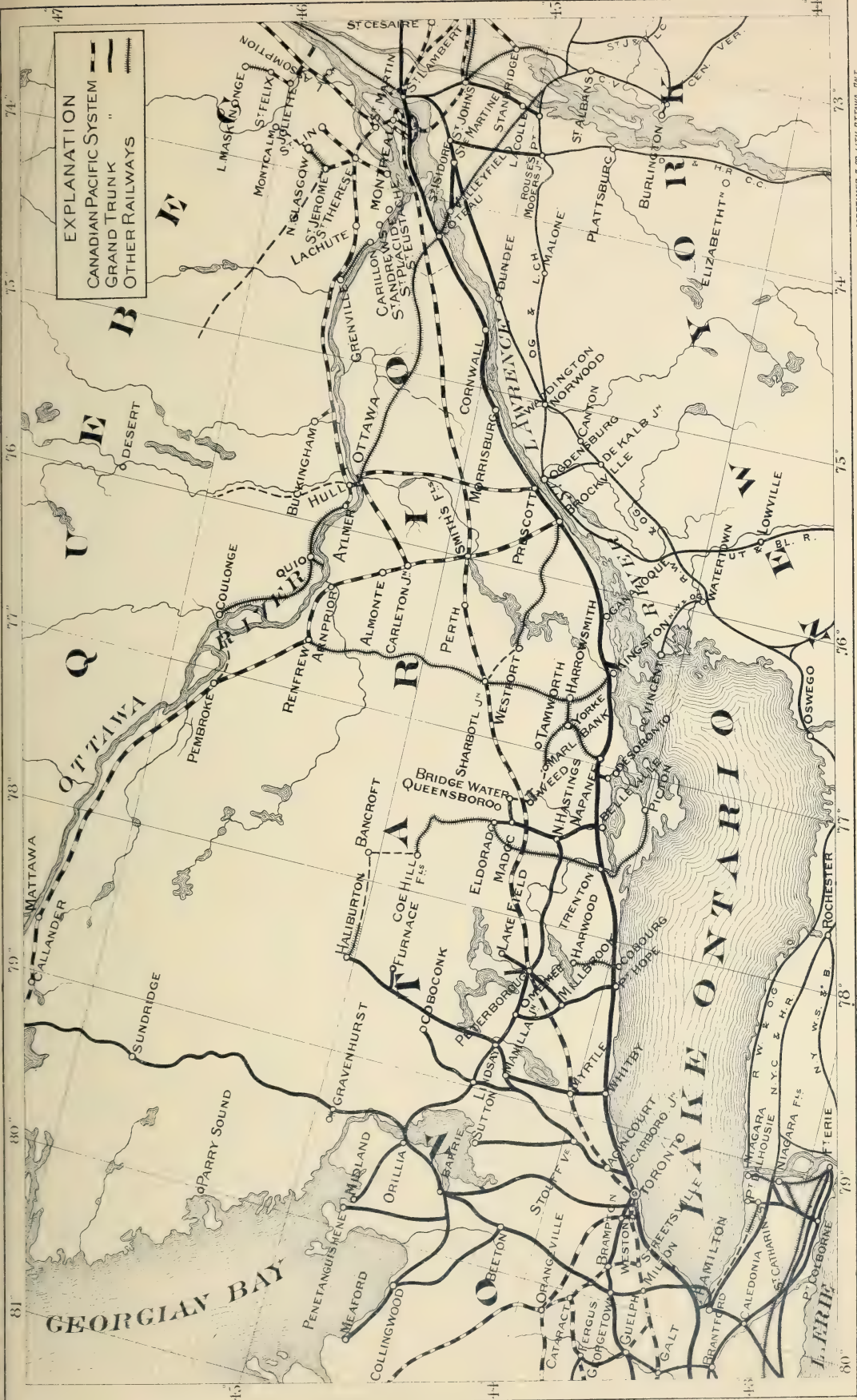


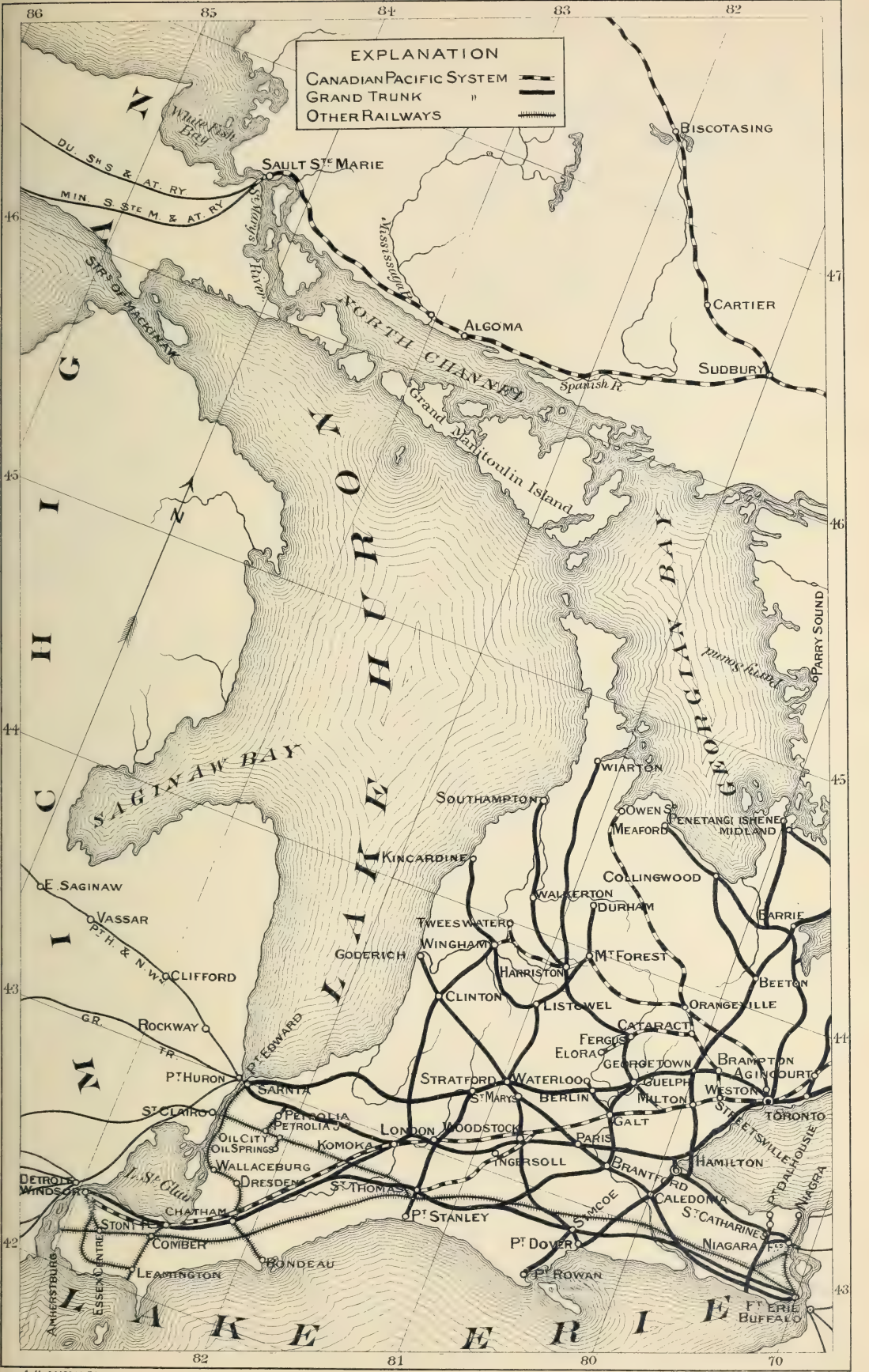


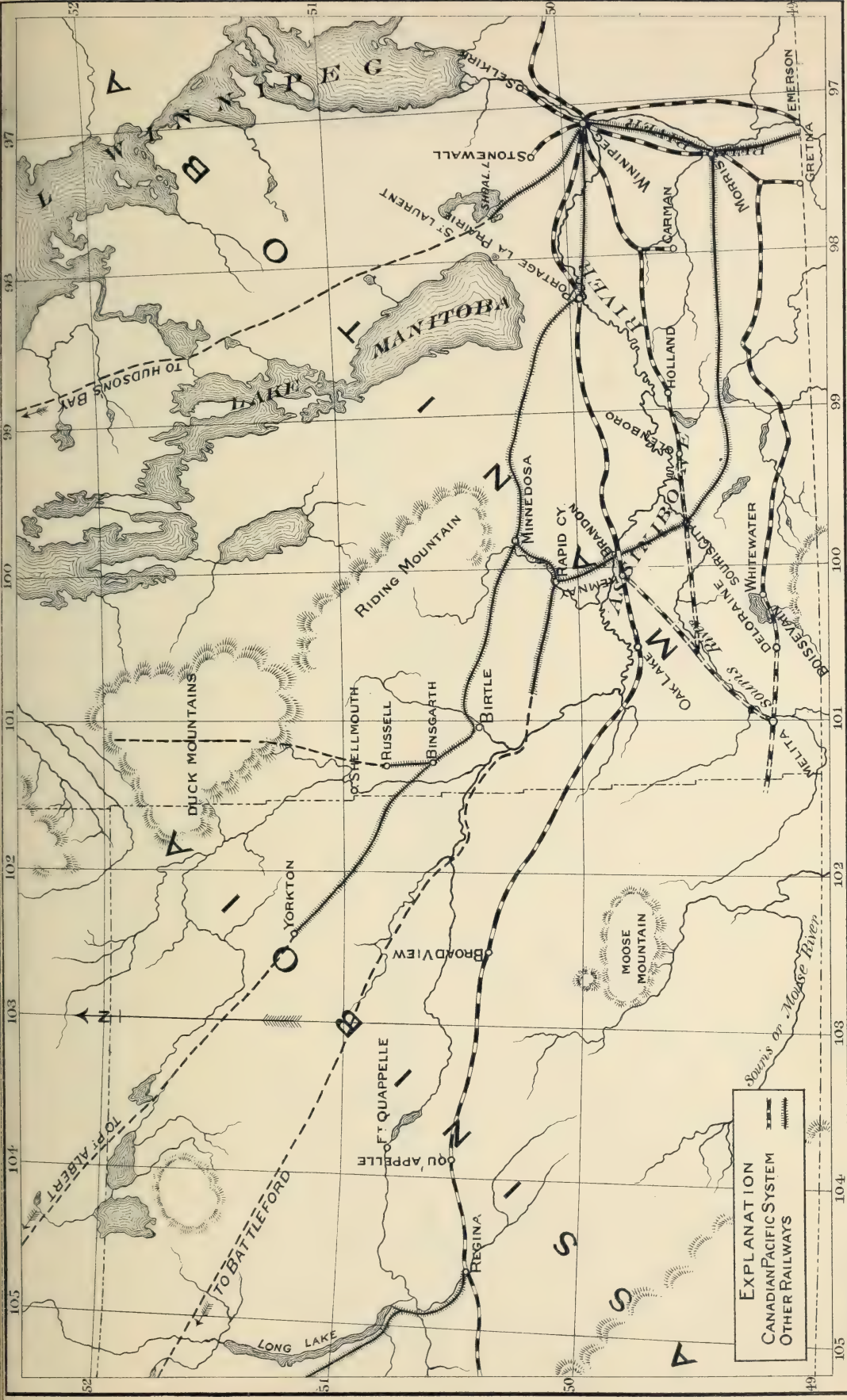
EXPLANATION

- CANADIAN PACIFIC SYSTEM
- GRAND TRUNK
- "
- GOVERNMENT RAILWAYS
- OTHER RAILWAYS









EXPLANATION

CANADIAN PACIFIC SYSTEM

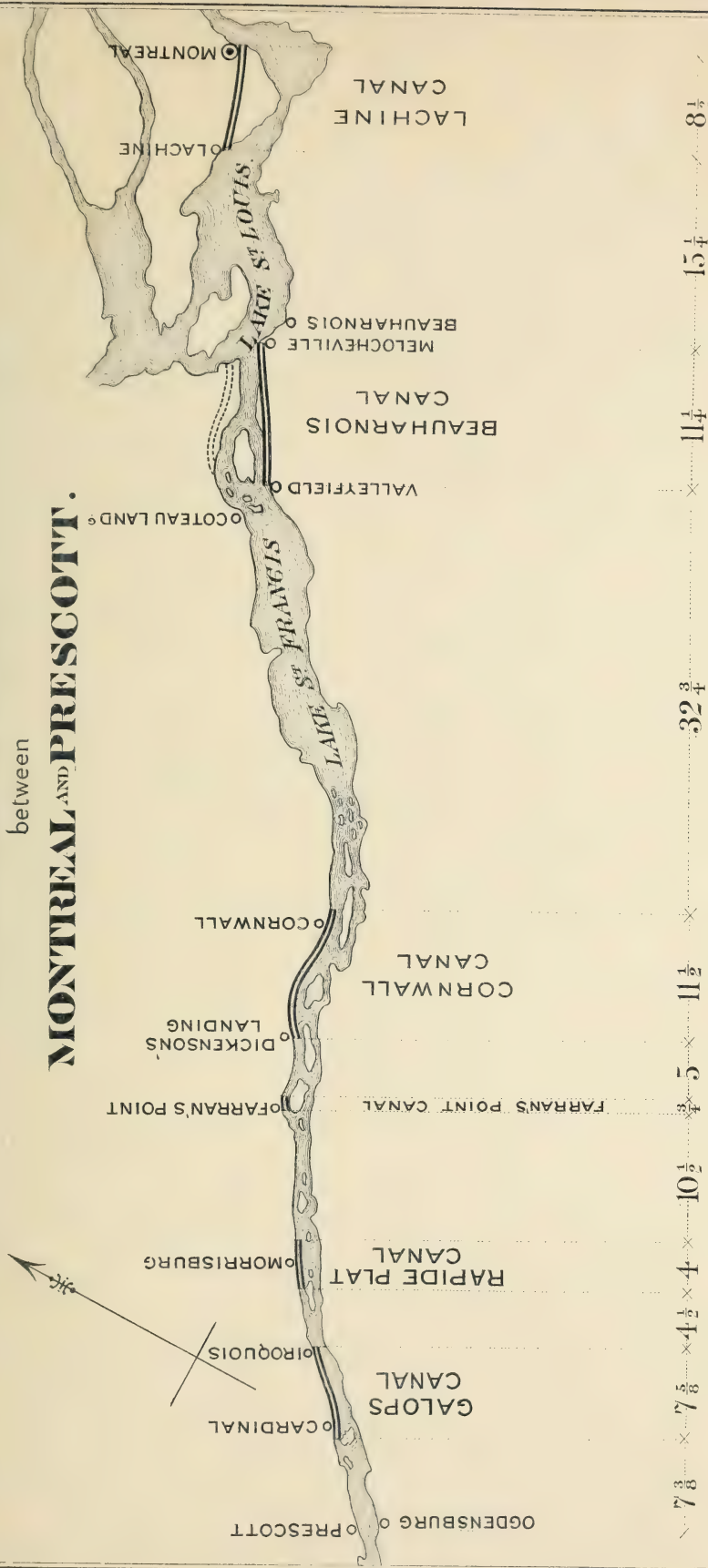
OTHER RAILWAYS

DIAGRAM

Shewing the Canals on the
S^T LAWRENCE RIVER.

between

MONTREAL AND PRESCOTT.



Total Canal Navigation	43 ⁵ / ₈ Miles
" River	75 ³ / ₈ "
" Prescott to Montreal	719 "

APPENDICES.

APPENDIX No. 1.

STATEMENT showing the amount expended by the Department of Railways and Canals,
Dominion of Canada, during the Fiscal Year ended 30th June, 1889.

Name of Work.	Construction.	Repairs.	Staff and Maintenance.
	\$ cts.	\$ cts.	\$ cts.
CANALS.			
Lachine.....	76,032 96	22,957 71	54,110 67
do Income.....	972 71		
Cornwall.....	163,993 85	58,205 26	17,890 55
Williamsburgh.....	59,867 26	8,794 61	7,485 28
Beauharnois—Income.....	10,993 52	14,982 54	20,019 11
St. Lawrence.....	18,493 92		
Welland.....	44,494 56	77,547 77	113,587 05
do deepening to 14 ft.....	179,468 76		
do land and damages.....	2,909 50		
do weirs and dams, Dunnville—Income.....	15,500 83		
do dams above and below Dunnville—Income...	760 00		
do overhauling superstructure, Pt. Dalhousie pier—Income.....	13,721 63		
do bridge at Chippewa—Income.....	9,861 33		
do construction bridge across Feeder—Income..	3,960 01		
Sault Ste. Marie.....	34,018 95		
Ste. Anne's.....	24,786 33	1,730 79	2,569 22
Carillon.....	137 10	10,135 66	22,098 88
Grenville.....	161 07		
Culbute.....	17,112 01	116 53	1,050 00
Rideau—Income.....	6,665 22	18,106 36	33,801 77
Trent.....	47,592 13	5,935 94	3,242 05
do Income.....	29,677 92		
Murray.....	215,326 46		
St. Ours—Income.....	17,964 45	2,002 63	2,421 14
Chambly do.....	51,437 87	19,392 18	19,679 22
St. Peters do.....	500 00	353 38	3,085 29
Tay.....	89,486 18		
Arbitrations and awards—Income.....	4,121 31		
Steam dredge—Income.....	900 00	1,999 79	
Surveys—Income.....	4,857 06		
Miscellaneous.....	213 50		
Salaries and contingencies, canal officers.....			*3,207 85
Total on Canals.....	1,145,988 40	242,261 15	304,248 08
RAILWAYS.			
Pacific.....	87,134 47		
Intercolonial.....	656,338 43		3,153,928 69
do Eastern Extension.....	34,235 73		90,719 04
do Windsor Branch.....			20,856 50
Prince Edward Island.....			247,559 44
Cape Breton.....	1,083,276 60		
Annapolis and Digby.....	9,847 27		
Oxford and New Glasgow.....	841,942 97		
Surveys—Income.....	15,991 70		
Statistics do.....	560 94		
Carried forward.....			

* Expenditure from 1st of June, 1889.

STATEMENT showing the amount expended by the Department of Railways and Canals, Dominion of Canada, &c.—*Concluded.*

Name of Work.	Construction.	Repairs.	Staff and Maintenance.
	\$ cts.	\$ cts.	\$ cts.
Brought forward.....			
RAILWAYS— <i>Concluded.</i>			
Subsidies.....	846,721 83		
Albert Railway Company (Loan).....	176 62		
Fredericton and St. Mary's Bridge Company (Loan).....	25,053 00		
Total on Railways.....	3,501,279 56		3,513,063 67
Total on Railways and Canals.....	4,747,267 96	242,261 15	3,817,311 75

Total amount expended.....\$8,806,840 86

LEONARD SHANNON,

Accountant.

DEPARTMENT OF RAILWAYS AND CANALS,
31st December, 1889.

APPENDIX

STATEMENT showing the amount expended on the construction and the

(Repairs not

NOTE.—Some of the items in the following canal statements have been

By Whom Expenditure Incurred.	Year ending 30th June.	Lachine Canal.	Beauharnois Canal.
		\$ cts.	\$ cts.
Imperial Government.....	Up to June 30, 1867	40,000 00	.....
Provincial Government.....		2,547,532 85	1,611,424 11
Dominion Government.....	1868	1,852 70	63,193 75
do	1869	2,000 00	55 00
do	1870	.....	27 50
do	1871	12,231 40	.....
do	1872	36,708 15	27 50
do	1873	42,982 49	5,122 50
do	1874	158,618 35	26 00
do	1875	197,420 52	36 00
do	1876	327,769 39	.....
do	1877	1,439,375 73	.....
do	1878	1,484,619 63	.....
do	1879	958,053 30	.....
do	1880	369,566 74	266 15
do	1881	292,165 51	.....
do	1882	255,799 99	.....
do	1883	398,356 64	6,727 44
do	1884	188,266 18	3,277 98
do	1885	111,215 23	7,999 79
do	1886	210,509 42	8,491 80
do	1887	41,754 11	3,633 57
do	1888	27,410 72	14,411 97
do	1889	77,005 67	10,993 52
Total.....	.....	9,221,214 72	1,735,714 58

No. 2.

enlargement of Canals of the Dominion of Canada, up to 30th June, 1889.

included.)

reclassified, bringing them into agreement with the Public Accounts.

Cornwall Canal.	St. Lawrence Canals. — Not Appor- tioned.	Williamsburg Canals.	St. Lawrence — Chain Vessel and Improve- ment of Navigation.	Surveys, St. Lawrence and Canals.	Welland Canal.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
					222,220 00
1,933,152 69	116,821 31	1,320,655 54			7,416,019 83
2,786 60					12,097 84
10,692 04					43,486 36
17,780 05					22,173 72
7 50					48,569 10
10,000 21		1,077 00			59,702 76
1,011 75				33,241 69	130,158 47
				26,541 30	746,420 61
1,780 00				20,611 36	1,047,119 91
			28,500 00	21,715 47	1,570,178 19
49,211 37			28,064 67	19,312 64	2,199,962 61
145,015 45			1,623 76	3,946 70	2,138,392 99
143,092 05				9,265 77	1,552,697 41
109,454 95			623 52	8,591 04	1,252,924 75
53,948 14			6,927 96		1,249,536 56
44,587 61			28,933 45		617,066 97
21,728 93		13 19	44,874 31		555,412 32
23,018 13		2,473 44	89,846 03		432,336 21
78,333 86		103,237 12	115,110 17		469,655 59
64,781 78		149,835 71	116,051 73		216,739 75
46,966 43		115,853 00	74,437 31		1,074,902 54
67,945 74		71,741 96	56,482 85		440,461 80
163,993 85		59,867 26		18,493 92	269,714 01
2,989,288 53	116,821 31	1,824,754 22	591,475 76	161,719 89	23,787,950 30

APPENDIX

STATEMENT showing the amount expended on the construction and the

(Repairs not

By whom Expenditure incurred.	Year ending 30th June.	Ste. Anne's Lock.	Carillon and Grenville Canals.	Culbute Lock.	Rideau Canal.	Chambly Canal.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Imperial Government.....	{ Up to June 30, 1887. }				3,911,701 47	
Provincial Government....		134,456 51	63,053 64		153,062 60	634,711 76
Dominion Government.....	1868		19,817 22		7,298 12	
do	1869					
do	1870		4,167 96		13 16	
do	1871		23,119 37		11,732 98	2,839 85
do	1872	1,939 46	165,257 28		4,967 50	1,906 40
do	1873	540 11	136,250 48	835 53	18,070 97	759 00
do	1874	12,753 27	245,258 38	38,388 99	5,793 16	2,810 00
do	1875	32,627 71	339,864 76	63,659 29	9,310 85	2,415 00
do	1876	24,935 85	326,203 16	76,842 44	2,163 96	
do	1877	30,003 08	245,738 04	56,081 87	214 11	80 00
do	1878	14,618 85	22,676 20	5,933 53		
do	1879	22,113 02	243,141 24	20,694 19	7,703 88	
do	1880	3,054 68	281,514 27	16,688 20		
do	1881	69,042 76	336,707 53	4,721 62	133 50	
do	1882	193,158 36	433,084 39	29,567 15		31,796 41
do	1883	172,959 95	433,575 10	14,249 60	70 65	21,332 36
do	1884	142,006 25	399,267 16	8,151 16	4,597 50	41,640 77
do	1885	93,679 57	157,187 72	19,071 76	2,098 76	21,049 23
do	1886	129,681 67	105,048 24	26,385 27	550 00	14,547 27
do	1887	51,330 18	20,747 11	7,760 88	20,823 96	17,911 17
do	1888	20,283 14	38,996 29	7,573 99	18,889 48	65,536 64
do	1889	24,786 33	298 17	17,112 01	6,665 22	51,437 87
Total		1,173,970 75	4,040,973 71	413,717 48	4,185,861 83	910,773 73

No. 2.—*Concluded.*
enlargement of the Canals of the Dominion of Canada, &c.—*Concluded.*
included.)

St. Peter's Canal.	Survey Baie Verte Canal.	Murray Canal.	Trent Canal.	Tay Canal.	Sault Ste. Marie Canal.	St. Our's Lock.	Total.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
							4,173,921 47
156,523 32			309,371 31			121,537 65	16,518,323 12
21,519 72		400 00					128,965 35
70,719 80							126,953 20
46,193 57							90,355 96
	17,929 34						116,429 54
	6,399 41						287,985 67
	14,943 83						383,916 82
	4,018 90						1,240,628 96
20 97	443 00						1,715,309 37
11,125 00	110 75						2,389,544 21
63,330 18	22 30						4,131,396 60
26,511 51							3,843,338 62
107,337 75							3,064,098 61
80,120 54			561 50				2,123,366 34
69,434 76	520 00						2,083,138 34
484 00		7,135 63	5,836 51	748 65			1,648,199 12
		84,071 68	50,070 82	4,831 80		17,230 32	1,825,505 11
2,471 40		118,187 43	126,592 48	50,878 12		5,279 17	1,638,289 41
16,820 15		148,902 66	121,382 84	92,473 97		4,700 64	1,562,919 06
2,316 85		179,704 52	75,103 30	65,561 51			1,365,308 82
1,837 75		142,563 66	179,541 63	49,617 92			1,849,681 22
		146,754 37	114,879 35	54,166 57	8,145 06		1,153,679 93
500 00		215,326 46	77,270 05	89,486 18	34,018 95	17,964 45	1,134,933 92
677,267 27	44,387 53	1,043,046 41	1,060,609 79	407,764 72	42,164 01	166,712 23	54,596,188 77

APPENDIX No. 3.

STATEMENT showing Subsidies voted for Railways as to which contracts have been entered into and payments made, up to 30th June, 1889.

Subsidies Voted.		Railways.		Payments.						Total to June 30, 1889.
Authority	Amount.			1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.	
	\$	cts.		\$	\$	\$	\$	\$	\$	\$ cts.
45 Vic., cap. 25.	156,800 00		International Railway, Quebec.....	144,000						152,960 00
46 do 14.	384,000 00									
46 do 25.	80,000 00									
48-9 do 59.	96,000 00									
48 do 10.	186,295 00		Quebec and Lake St. John Railway, Quebec...	32,000	37,027	186,745	202,219	232,013 00	19,911 00	709,915 00
49 do 24.	28,800 00									
50 1 do 3.	96,000 00									
51 do 25.	89,600 00									
49 do 10.	70,000 00									
49 do 24.	12,800 00		Napancee, Tamworth and Quebec Ry., Ont....	32,000	57,600					89,600 00
50-1 do 3.	32,000 00									
50-1 do 3.	272,000 00		Pontiac Pacific Junction Railway, Quebec.....		49,090	41,000	60,580	24,158 00		174,828 00
47 do 25.	115,200 00									
47 do 8.	76,800 00		Caraguet Railway, N.B.....		32,000	76,800	61,200	40,050 00	13,950 00	224,000 00
50-1 do 24.	32,000 00									
47 do 8.	32,000 00									
49 do 10.	57,600 00		Great Northern Railway, Quebec.....		25,088					25,088 00
52 do 3.	22,400 00									
47 do 8.	48,000 00		Kingston and Pembroke Railway, Ontario.....		48,000					48,000 00
45 do 14.	660,000 00				154,440	1,051,590	78,370			1,284,400 00
46 do 25.	660,000 00		Northern and Pacific Junction Ry., Ontario.....							
47 do 8.	128,000 00									
48 9 do 59.	19,200 00									
49 do 10.	32,000 00		Northern and Western Railway, N.B.....			128,000	18,200	159,400 00	6,300 00	311,900 00
48-9 do 59.	140,800 00									
47 do 8.	211,200 00									
Written off by 51										
Vic., cap. 3.	150,858 00		Quebec Central Railway, Quebec.....			60,342				60,342 00
48-9 do 59.	60,342 00									
48 9 do 59.	72,000 00		Montreal and Sorel Railway, Quebec.....			64,972	4,950			69,922 00
50 1 do 24.	30,000 00					30,000				
46 do 25.	64,000 00		Montreal and Champlain Junction Ry., Que..					16,400 00	36,700 00	83,100 00
51 do 3.	38,400 00									
47 do 8.	44,252 82		Elgin, Petitecodiac and Havelock Ry., N.B....			38,400				38,400 00
	22,400 00		St. Louis and Richibucto Railway, N.B.....			22,400				22,400 00

APPENDIX No. 4.

CANADIAN GOVERNMENT RAILWAYS, OFFICE OF THE CHIEF ENGINEER AND GENERAL MANAGER,

OTTAWA, 1st October, 1889.

SIR,—I have the honor to report to you upon the progress made during the fiscal year ended the 30th June, 1889 and up to this date, with the railways under my charge in process of survey, and also with those under construction.

HARVEY-SALISBURY SHORT LINE.

From Harvey station, on the New Brunswick Railway, to a junction with the Intercolonial Railway near Berry's Mills station.

About 115 miles under survey.

Early in the summer I was instructed to have a survey made of the proposed line of railway from Harvey station, on the New Brunswick Railway, *via* Fredericton, to a point on the Intercolonial Railway a few miles north or west of Moncton. I was to keep in view the object of securing the shortest, best and cheapest line the country would afford. Mr. Vernon Smith, being an engineer of long experience, was selected to take charge of the survey in the field, and his staff was to consist of three surveying parties, each under a capable and trustworthy engineer, and for this service Mr. Maxwell, Mr. Walsh, and Mr. Houghton, were chosen, as men who would devote their skill and energy to the laying out of the best line to be found between the two objective points. They took the field in June, and first ran out a trial line with a view of improving on the survey made by Messrs. Brown and Bright in the season of 1885. Their efforts, so far, have been crowned with success. They have closed their preliminary survey throughout, and it indicates a considerable shortening of the distance of the old survey, without any increase in the quantity of works of construction. The country has been more thoroughly explored than in 1885, and it has been found that, while the route taken by Messrs. Brown and Bright was in general well chosen, the country required a more thorough examination than they could give it during that season. I have every expectation that the line when located, between Harvey station, on the New Brunswick Railway and Moncton on the Intercolonial Railway *via* Fredericton, will be about 32 miles shorter than the route *via* St. John.

The work of location is now in progress, Mr. Maxwell having about 24 miles located from Harvey station towards Fredericton, showing a very favorable line; Mr. Walsh has 20 miles located, from the railway bridge over St. John River at Fredericton towards Moncton, giving good results; and Mr. Houghton has run out about 25 miles of location between the Salmon Arm and Moncton. This latter section shows a rather heavier line than I had expected; nevertheless, the amount of work thereon is only moderately heavy. Mr. Smith informs me that he expects to have all the field works completed before the end of October, whereupon the preparation of the plans, profiles and estimates will be proceeded with and pushed forward vigorously, so as to enable me to make my report upon them by the close of the year, or shortly afterward.

OXFORD AND NEW GLASGOW RAILWAY.

Under Construction—72 miles.

The summer of 1888 in Nova Scotia was so unfavorable for the prosecution of works of railway construction that the work on this road did not proceed so rapidly

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as had been anticipated. The continuous heavy rains throughout the season impeded the progress of the work, especially on those contracts where heavy, sticky clay was met with. Consequently, a lull occurred in the prosecution of the work, and the contractors appeared to be undecided as to the course they would pursue. Early in the present season they organized a weak force on the sections west of Mingo Road, and the work for some time dragged slowly along. In July the force employed was increased, and efforts are being made to complete the work this season, which I hope may be successful, the principal works remaining to be done being the building of a masonry pier in the Wallace River bridge, and the pivot pier in the Pugwash Harbor bridge. These, if henceforth carried on with skill and vigor, should be completed within a short time. With proper management they should have been completed long ago.

On the section from Brown's Point to Mingo Road, 28 miles, the track is laid, and a lift of ballast is put under it throughout, and the contractors are now engaged in putting on the finishing lift. The fencing is in a forward state, and the station buildings are nearly finished.

The contract for track-laying and ballasting on the sections west of Mingo Road to Oxford, including the Pugwash Branch, in all about $41\frac{1}{2}$ miles, has recently been awarded to Messrs. Gray, McManus, Trites & Co., the contractors for the section of road between Brown's Point and Mingo Road. Upon the section between Mingo Road and Oxford, Messrs. McDonald & O'Brien had laid about $4\frac{1}{2}$ miles of track, leaving about 37 miles to be laid by Messrs. Gray, McManus, Trites & Co. The ballast for this section will, it is believed, have to be transported from Oxford, at the west end of the section, and from Scotsburn, 18 miles east of the east end. The haul is rather long, but these are the only places along the line, so far as is known, where suitable material can be obtained.

These contractors have commenced the work, and have laid 4 miles of track, leaving a balance of 33 miles to be laid; and it is to be expected that the track will be laid over the entire road this season. The station buildings on the section west of Mingo Road, under contract with Messrs. Rhodes, Curry & Co., are in the course of erection, and it is confidently expected that they will be finished at an early day, about 50 per cent. of the work having already been done. The wells for the water supply throughout are being built, Messrs. McDougall & Giles who commenced the work of sinking them a short time ago.

The steel superstructures for the bridges over the several rivers on the section west of Mingo Road are delivered on the ground. All the larger spans contracted for are to be erected by the Dominion Bridge Company of Lachine, and the six 20-foot spans by Mr. Macpherson, of Oxford. The erecting gangs have arrived on the works, and are now engaged in the erection of the Waugh River bridge of 125 feet span. The work of erecting these bridges should only take a short time.

The following is a list of contractors for the several works of construction on this road:—

1. Messrs. Gray, McManus, Trites & Co., for the construction of the section between Brown's Point and Mingo Road, 28 miles.

2. Messrs. Stewart & Jones, for the grading, bridge and culvert masonry, fencing, &c., upon the section between Mingo Road and Wallace, 18 miles.

3. Messrs. McDonald & O'Brien, for the grading, bridge and culvert masonry, fencing, &c., upon the section from Wallace to Oxford, 20 miles.

4. Messrs. McDonald & O'Brien, for the construction (except buildings) of the section between Oxford and Oxford Junction, 3 miles.

5. Donald Sutherland, for the grading, bridge and culvert masonry, fencing, &c., upon the Pugwash Branch, from Pugwash Junction to Pugwash Harbor, 4 miles.

6. Messrs. McDougall & Giles, for the grading, bridge and culvert masonry, fencing, &c., from Pugwash Harbor to the wharf at Pugwash, 1 mile.

7. Messrs. McDougall & Giles, for the construction of the wharf at Pugwash.

8. Messrs. Rhodes, Curry & Co., for the erection of station buildings, water tanks, &c., between Mingo Road and Oxford Junction, including the Pugwash Branch.

9. The Dominion Bridge Company, for the construction of steel superstructures for all bridges of spans of over 20 feet, on the section between Mingo Road and Oxford.

10. Messrs. A. McPherson & Co., for the construction of the six iron plate girder bridges of 20 feet span.

11. Messrs. McDougall & Giles, for the building of wells for the water service over the whole line.

12. Messrs. Gray, McManus, Trites & Co., for the ballasting and track-laying between Mingo Road and Oxford.

13. Richard Black and Archibald Campbell, 100,000 ties for the section west of Mingo Road.

The following rolling stock has been purchased and delivered for this road:—

- | | |
|--|--|
| 6 Engines, Canadian Locomotive Company, | |
| 4 do Manchester Locomotive Company, | |
| 50 Box cars, James Harris & Co., | |
| 10 do fitted with Eastman heaters, James Harris & Co., | |
| 22 do James Crossen, | |
| 6 Cattle cars, James Crossen, | |
| 10 Platform cars, James Crossen, | |
| 2 Conductors' vans, James Crossen; | |

and contracts are about to be made for the balance of the rolling stock required, namely:—

- | | |
|--------------------------------|---------------------|
| 6 First-class passenger cars, | 140 Platform cars, |
| 8 Second-class passenger cars, | 6 Conductors' vans, |
| 4 Baggage and smoking cars, | 2 Snow ploughs, |
| 3 Mail cars, | 2 Flangers. |
| 68 Box cars, | |

The rolling stock will consist of:—

- | | |
|--------------------------------|---------------------|
| 10 Locomotives, | 150 Box cars, |
| 6 First-class passenger cars, | 6 Cattle cars, |
| 8 Second-class passenger cars, | 8 Conductors' vans, |
| 4 Baggage and smoking cars, | 2 Snow ploughs, |
| 3 Mail cars. | 2 Flangers. |
| 150 Platform cars. | |

A sufficient tonnage of rails to cover this road, 7,000 tons, with fastenings, has been provided.

It is the intention to have all the track laid and ballasted this season, if possible. It is believed that the works of construction, when finished, will be very substantial and durable.

CAPE BRETON RAILWAY.

This road extends from Point Tupper, on the Cape Breton shore of the Strait of Canseau, to Sydney and North Sydney. It is 98 miles in length.

The wharf at Point Tupper has been completed for some time. It has withstood the run of ice in the strait remarkably well, having received scarcely a scratch. One section of this wharf was constructed by Mr. O'Donohue and the other by Messrs. Isbester & Reid.

The section of road between Point Tupper and the Grand Narrows is being constructed by Messrs. Isbester & Reid. The grading on the first 35 miles, except one clay cutting at Orangedale, which will be finished at the end of the present month, may be said to be practically completed, and the work of track-laying and ballasting is in progress, the contractors having two engines and twenty-one cars at work, and some 15 miles of track laid. Upon the remaining portion of this section the grading is being pushed forward, and is in an advanced stage. The ground consists largely of a very stiff, hard clay, which, when saturated with water, becomes like so much pudding, running and slipping both in cuttings and fills, carry-

ing everything before it. It is a material which does not stand in embankments, as it sloughs outside the ordinary slope lines, and it is a dangerous material to place near masonry structures; and in some cases it has, on this account, been necessary to waste it, and borrow a drier and more suitable material to place around them. Several heavy embankments have to be completed with material to be taken from borrow pits. These embankments the contractors propose to make up with material hauled by train from a distance, as the clay material to be had in the immediate locality is very hard and costly to work, besides being of a character so uncontrollable that it spews out of the embankments and is wasted. This will involve the necessity for the erection of temporary trestles at these points, from which to drop the materials to make up the embankments. As the sites of these embankments will be passed over by temporary trestles, they will not interfere with the track-laying; but a large gypsum cutting, some four miles from the Grand Narrows, will probably not be completed until some time in December, and if such be the case, the ballasting will scarcely be completed this season.

A large number of 3-feet cast iron culverts have been introduced, and are laid in a bed of concrete which forms a 12-inch coating all around them, the ends being neatly finished with good, strong masonry. They make an excellent passage for water in such a country, and are, I consider, an excellent and durable piece of work. Most of the bridge masonry is completed. All the iron trestles, and there are some large ones, are completed, and the steel bridge superstructures are for the most part erected. A large quantity of cedar fence posts and track ties are delivered on the line. The freight house on the wharf at Point Tupper is nearly finished, and the passenger station and engine-house foundations are in course of construction. Nothing has yet been done on any of the other station buildings.

The bridge over the Grand Narrows is being built by Messrs. Reid & Isbester. It is to be a steel structure of six spans of 242 feet each, and a swing over all of 245 feet, giving an aggregate length of 1,697 feet. The piers and abutments are of massive masonry. The depth of water for 1,200 feet in the line of the bridge is 75 feet. Mr. Reid takes special charge of this work. He is a good organizer, and has his work well in hand. Of the 9,000 cubic yards of stone required for the structure, about 8,000 have been delivered at the site of the bridge, and a large stock of Portland cement is under cover at the Grand Narrows. The abutment at the west side of the Narrows is completed. It rests on a pile foundation. The caissons of four of the piers are set in place, and the masonry is built up in three of them to within about 3 feet of the bridge, and about 40 feet of masonry built in the fourth. Two more caissons are under construction, in one of which the masonry is being built. All the piles required for the work are on hand; also, the creosoted timber and the steel superstructure is being built at the Dominion Bridge Works at Lachine. Mr. Reid's organization is so complete, and the skill and attention he applies to his work is so thorough, that I can see no difficulty in having the bridge finished this year.

The construction of the section of road from the Grand Narrows to Sydney and North Sydney, 52½ miles in length, is being carried on by the Government. The masonry and steel bridge superstructure is completed, except the bridge under the coal company's railway at Sydney, which it is thought can be built to greater advantage after the trains on the Sydney and Louisburg Railway cease running for the season. The grading throughout is in such an advanced state that it will not interfere with the track-laying, which is now in progress, and which it is intended to push forward with vigor to completion. There are now 25 miles of track laid. It is expected that the track-laying and one lift of ballast throughout this section will be completed this season. The station-houses, engine-house and water services are in an advanced stage. They are being erected by Mr. J. F. Teed, who is making good progress with the work.

The following is a list of the contractors for the several works of construction on this railway.—

1. Messrs. O'Donohue & Kennedy, for the south section of Point Tupper Wharf.

APPENDIX No. 5.

CANADIAN GOVERNMENT RAILWAYS, OFFICE OF THE CHIEF ENGINEER AND GENERAL MANAGER,

OTTAWA, 1st October, 1889.

Mileage Table of Canadian Government Railways in Operation.

	Miles.
Intercolonial Railway	894
Eastern Extension.....	80
Windsor Branch. ... ,	32
Prince Edward Island Railway.....	211
	<hr style="width: 50px; margin: 0 auto;"/> 1,217 <hr style="width: 50px; margin: 0 auto;"/>

SIR,—I have the honor to submit to you, with this my annual report, the reports and accounts of the working of the railways in operation under my charge during the year ended the 30th June, 1889.

On the 3rd June, 1889, the Canadian Pacific Railway Company opened their through route from Montreal *via* Mattawamkeag to St. John, having first made an arrangement with the Dominion Government for fast express trains to be put on between St. John and Halifax to make close connection with their trains at St. John, the Canadian Pacific Railway Company's solid trains being allowed to run through to and from Halifax. These trains between Halifax and St. John have, as a rule, made very good time. The addition of this train, connecting at St. John at the hours named by the Canadian Pacific Railway Company, necessitated a re-adjustment of the time of arrival and departure of the through trains between Montreal, Halifax and St. John *via* Levis, so as to give the fullest accommodation to the travelling public. The Canadian Pacific Railway Company's through trains *via* St. John leaves Halifax at 5:50, reaching Montreal at 8:35 the following day; whereas, the Intercolonial through train departs from Halifax at 13:35 and reaches Montreal the next day at 20:05, and *vice versa*. The Canadian Pacific Railway's through train leaves Montreal at 20:30, and arrives at Halifax the next day at 23:30; whereas the Intercolonial through train leaves Montreal at 8, and arrives at Halifax at 13:55 the next day.

A portion of the business of the Maritime Provinces with Montreal, Western Canada and the Western States may be expected to take the Canadian Pacific Route *via* St. John and Mattawamkeag; and, as a consequence, a falling off must be looked for in the volume of traffic passing over the Intercolonial route *via* Levis, and, of course, a drop in the gross earnings of the Intercolonial Railway, but to what extent it is difficult to form an estimate at the present time, as so much depends on the policy to be adopted as regards this new connection.

The result of the year's operations of the Government railways may be stated as follows :—

Name of Railway.	Average Mileage per Year.	—	Amount.	Profit.	Loss.
			\$ cts.	\$ cts.	\$ cts.
Intercolonial.....	894	Earnings.....	2,895,364 35		
		Working expenses..	3,153,928 69		258,564 34
Eastern Extension.....	80	Earnings.....	72,436 65		
		Working expenses..	90,719 04		18,282 39
Windsor Branch.....	32	One-third earnings..	28,372 11		
		Maintenance.....	20,856 50	7,515 61	
Prince Edward Island.....	211	Earnings.....	171,369 56		
		Working expenses..	247,559 44		76,189 88
				7,515 61	353,036 61
					7,515 61
Total.....	1,217				345,521 00

The foregoing statement does not exhibit so satisfactory a result as could be desired, but is nevertheless an improvement upon the net result of the previous year's operations.

Loss during year 1887-88.....\$454,823 40

Loss during year 1888-89.....345,521 10

Balance in favor of 1888-89.....\$109,302 30

INTERCOLONIAL RAILWAY.

The improvement in the net result of the operations of the Government Railway is almost entirely due to the Intercolonial, the loss on operating which, having been less by \$105,093.42 than during 1887-88. This result is partly due to the favorable character of the last winter, and partly to the reduction in the quantity of coal carried to points west of Chaudière.

The following table shows the gross earnings, the tonnage of freight and the number of passengers carried in each year since 1st July, 1876, when the railway was opened as a through line.

Years.	Average Miles in Operation	Earnings.	Tons of Freight Carried.	Number of Passengers Carried.
		\$ cts.		
1876-77.....	714	1,154,445 35	431,327	613,428
1877-78.....	714	1,378,946 78	522,710	618,957
1878-79.....	714	1,292,099 69	510,861	640,101
1879-80.....	825	1,506,298 48	561,924	581,483
1880-81.....	840	1,760,393 92	725,577	631,245
1881-82.....	840	2,079,262 66	838,956	779,994
1882-83.....	840	2,370,921 10	970,961	878,600
1883-84.....	847	2,353,647 26	1,001,163	920,870
1884-85.....	861	2,368,153 65	970,089	914,785
1885-86.....	866	2,383,200 77	1,008,545	889,864
1886-87.....	867	2,596,009 83	1,131,334	940,144
1887-88.....	886	2,912,783 85	1,275,995	996,194
1888-89.....	894	2,895,364 35	1,204,790	1,091,189

I attribute the decrease in the gross earnings mainly to the holding back of shipments to and from St. John and other points, in anticipation on the part of shippers of obtaining lower rates of freight upon the opening of the Canadian Pacific Short Line. The reduction in the quantity of coal carried to points west of Chaudière has also contributed to this result.

The English mails were landed at Halifax during the winter, and at Rimouski in summer, as in past years, and were forwarded over the Intercolonial Railway by special mail train, except in cases in which the mail steamer landed them shortly before the schedule time of departure of the regular through express trains. The season being favorable, they made excellent time. For the greater comfort of the passengers by these special mail trains, a sleeping car is attached, which was impossible in previous years, owing to the limited number of these cars on the road, which was barely sufficient for the regular express train service.

The ocean-borne freight traffic was well maintained, and compares favorably with the business of previous years. The Allan and Dominion Companies' mail steamers, however, landed and shipped very little freight at Halifax to and from points along and beyond the Intercolonial, their cargoes being for the most part destined for Montreal and the west *via* Portland, Maine. But many other lines of steamers found it to their advantage to land and ship their cargoes, or a large portion of them at Halifax, to and from points along and beyond the Intercolonial. The following table shows the tonnage of such ocean-borne freight landed and shipped at Halifax to and from such points in each year since the opening of the railway as a through line:—

East Bound.		West Bound.	
Year.	Tons.	Year.	Tons.
1876-77.....	5,448	1876-77.....	9,895
1877-78.....	5,736	1877-78.....	27,040
1878-79.....	3,528	1878-79.....	34,715
1879-80.....	13,104	1879-80.....	40,994
1880-81.....	15,936	1880-81.....	42,629
1881-82.....	21,259	1881-82.....	42,785
1882-83.....	23,421	1882-83.....	51,666
1883-84.....	34,901	1883-84.....	51,728
1884-85.....	35,461	1884-85.....	49,958
1885-86.....	38,524	1885-86.....	37,826
1886-87.....	46,477	1886-87.....	65,640
1887-88.....	44,343	1887-88.....	76,020
1888-89.....	40,058	1888-89.....	72,114

The business in fish, fresh or salted, has not attained the dimensions which might have been anticipated from the measures taken for its encouragement at the request of parties engaged in it. Refrigerator cars were provided, special fast trains run, and low rates of freight granted; but the trade during the past few years has

not corresponded to these efforts to foster it. I submit here a table showing the tonnage carried each year since 1875-76:—

Fresh Fish.	Tons.	Salt Fish.	Tons.
1875-76	1,249	1875-76	2,748
1876-77	1,429	1876-77	3,655
1877-78	2,276	1877-78	3,912
1878-79	2,638	1878-79	3,126
1879-80	1,802	1879-80	5,176
1880-81	2,085	1880-81	9,964
1881-82	2,033	1881-82	7,973
1882-83	2,723	1882-83	9,213
1883-84	3,375	1883-84	9,832
1884-85	3,643	1884-85	10,841
1885-86	5,987	1885-86	5,915
1886-87	4,400	1886-87	7,135
1887-88	3,739	1887-88	6,668
1888-89	5,034	1888-89	7,950
Total	42,413	Total	94,108

The following is a statement of the quantity and classes of rolling stock purchased on capital account up to 30th June, 1888, and of the additions made to it during the last fiscal year. This stock has to be maintained at the cost of revenue:—

	Engines.	Passenger Car Stock.					Conductor's Vans.	Box Cars.	Platform Cars.	Coal Cars of three several kinds.	Snow Ploughs.	Wing Ploughs.	Flangers.	Steam Ploughs.
		1st Class Sleepers and Parlors.	1st Class	2nd Class Sleepers.	2nd Class.	Baggage and Mail.								
Total up to 30th June, 1888	164	15	69	6	76	47	79	1635	1450	2186	37	10	17	....
Additions in 1888-89	12	2	6	....	....	4	2	233	20	....	3	....	....	2
	176	17	75	6	76	51	81	1868	1470	2186	40	10	17	2

N.B.—Four of the baggage cars are running as conductors' vans.

The following rolling stock has been re-built during the year, at the cost of working expenses, to maintain the stock:—

	Engines.	Passenger Car Stock.					Conductors' Vans.	Box Cars.	Platform Cars.	Coal Cars.	Snow Ploughs.	Wing Ploughs.	Flangers.
		1st Class Sleepers and Parlors.	1st Class.	2nd Class Sleepers.	2nd Class.	Baggage and Mail.							
1888-89	4	....	....	....	....	2	2	6	1	59	52	....	....

The heating of the passenger train stock by steam direct from the locomotive appears to work very satisfactorily. It is now applied to cars running on the Halifax [1889]

and Quebec express, and I recommend, in the interest of the safety of the travelling public, that provision should be made for applying it to all passenger train stock.

The lighting of the trains by electricity, which was also introduced to guard against fire in case of accident, proves to be very expensive; but it lights the trains brightly, and is, I understand, much safer, should accidents happen, than the old method of lighting, and for this reason the increased cost is possibly warranted. I would therefore recommend that provision be made to extend it throughout the passenger stock.

The introduction of heavier types of engines and other rolling stock has necessitated, as I mentioned in my report of last year, the strengthening of the iron bridges. Many of the smaller spans have been provided with additional braces, and the large bridge over the Miramichi River has formed a charge against revenue.

The replacing of the 56-lb. by 67-lb. steel rails has been continued during the past year, and if the new rails prove to be good quality good results will no doubt follow. During the past four years, however, the quality of the rails supplied has been far from satisfactory, and in consequence the track has not had such an easy riding surface as could be desired. But great care has been taken to maintain it in good condition, and I believe it to be equal to and other road in Canada.

All rails are now supplied under a seven year guarantee. So far, the makers have not replaced any rails which have failed under the guarantee contracts, but it is expected that they will do so shortly.

CAPITAL ACCOUNT.

The expenditure on works on capital account, up to 30th June, 1888, and also during the last fiscal year, may be stated as follows:—

Total cost of road and equipment to 30th June, '88...	\$ 45,887,759 20
Refunds.....	1,110 30
	<u>\$ 45,886,648 90</u>

Appropriations:—

Increased accommodation at terminal and junction stations.....	\$ 26,108 49
Branch lines, including rolling stock therefor.....	258,443 15
Rolling stock.....	327,789 90
Heating cars by steam and lighting by electricity.....	41,047 91
Original construction.....	2,948 98
	<u>656,338 43</u>
Total up to 30th June, 1889.....	<u>\$ 46,542,987 33</u>

This amount may be classified as follows:—

Road.....	\$ 39,585,674 99
Rolling stock.....	6,957,312 34
Total.....	<u>\$ 46,542,987 33</u>

During the past summer I made an inspection of the way and works, and I can state, from personal observation, that the road is well maintained and in excellent running condition.

EASTERN EXTENSION RAILWAY.

CAPITAL ACCOUNT.

The expenditure on works on capital account up to the 30th June, 1888, and also during the last fiscal year, may be stated as follows :—

Total cost of road and equipment to 30th June, '88...\$1,284,495 76

Expended during 1888-89 :—

On elevated water service.....\$	21,482 16	
On increased accommodation at Mulgrave.....	12,753 57	
		34,235 73

Total to 30th June, 1889.....\$1,318,731 49

Classified as follows :—

Road.....	\$1,122,547 70
Rolling stock.....	196,183 79
Total.....	\$1,318,731 49

A very slight improvement has taken place in the revenue during the last fiscal year, and I scarcely look for any material change in the near future. The working expenses are practically the same as in the preceding year.

The following statement shows the earnings and working expenses for each year since the purchase of the road by the Dominion Government :—

	1884-85.	1885-86.	1886-87.	1887-88.	1888-89.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Earnings.....	73,050 01	66,893 11	64,107 10	70,552 20	72,436 65
Working expenses.....	78,273 65	94,756 06	94,254 04	90,954 73	90,719 04
Profit.....					
Loss.....	5,223 64	27,862 95	30,146 94	20,402 53	18,282 39

I trust that, as the fencing has been for the most part re-built, and is now of a strong and durable character, and that the greater portion of the ties has been renewed, and also a number of the wooden structures, that a reduction in the working expenses may be looked for ; but it cannot be very long before a considerable outlay will have to be made in replacing the wooden truss bridges by bridges of steel. Even so, I think the cost of operating the road will be less in future.

It is expected that the Cape Breton Railway, which will connect with this line at the Strait of Canso by steamer ferry between Port Mulgrave and Port Tupper, will be opened for traffic some time during the current fiscal year, whereupon it is hoped that there may be some increase in the traffic of the Eastern Extension.

WINDSOR BRANCH RAILWAY.

The same arrangement as in former years is in force for the operation of this line, the Windsor and Annapolis Railway Company working the traffic and the Government maintaining the way and works, the former receiving $\frac{2}{3}$ and the latter $\frac{1}{3}$ of the gross earnings.

The result of the year's operations is as follows :—

One-third gross earnings received by the Government.	\$28,372 11
Cost of maintenance of way and works.....	20,856 50
	<u>\$7,515 61</u>

It is probable that after the "Missing Link" is completed from Annapolis to Digby, which will give unbroken railway connection between Halifax and Yarmouth, and which is now being constructed by the Government, that the business of the Windsor Branch will increase.

This road has been well maintained, and is in an efficient state.

PRINCE EDWARD ISLAND RAILWAY.

CAPITAL ACCOUNT.

The expenditure on capital account remains the same as at the close of the preceding fiscal year :—

Cost of road.....	\$3,283,051 89
Cost of rolling stock.....	458,729 00
Total.....	<u>\$3,741,780 89</u>

The rolling stock provided on capital account, and representing the sum of \$458,729, consists of :—

Engines.....	21
First-class passenger cars.....	17
Second-class and baggage cars.....	15
Postal and smoking cars.....	3
Box cars.....	175
Platform cars.....	125
Conductor's vans.....	3
Pay car.....	1
Snow ploughs.....	8
Flangers.....	7

The passenger traffic continues to increase, 21,534 more passengers having been carried this year than during 1887-88. The earnings from this source have increased by \$7,687.73 over those of the preceding year. No improvement, however, has taken place in the volume of freight carried, nor in the revenue accruing from this source.

Owing largely to the cost of steel rail renewals, and the heavy expenditure on bridge and fence renewals, the working expenses exceed those of the preceding year by \$17,719.49. It will be necessary to renew from 10 to 12 miles of track annually with steel rails, until the entire line is steeled. During the year 1888-89 platform cars were rebuilt to maintain the stock.

The traffic on the Cape Traverse Branch is so very light, both passenger and freight, that it scarcely warrants the running of a daily train each way.

Prior to 1886-87, there was only a bi-weekly train service on this branch, but the Minister, at the urgent request of the residents of the district, granted them a daily service as a tentative arrangement, to see how far the traffic would develop. So far as business is concerned, it has proved a failure, though it is no doubt a convenience to a few persons living along the line.

I have the honor to be, Sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

Chief Engineer and General Manager.

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals, Ottawa.

APPENDIX No. 6.

INTERCOLONIAL RAILWAY.

OFFICE OF THE CHIEF SUPERINTENDENT,

MONCTON, N.B., 26th September, 1889.

SIR,—I have the honor to submit the following report on the working of the Intercolonial Railway during the fiscal year which ended 30th June, 1889.

I enclose the reports of the Chief Engineer and the Mechanical Superintendent and the following statements prepared by the Chief Accountant and Treasurer:—

- No. 1. Capital account.
 2. Revenue account.
 3. Locomotive power (Abstract No. 1.)
 4. Car expenses (do 2.)
 5. Maintenance of way and works (do 3.)
 6. Station expenses (do 4.)
 7. General charges (do 5.)
 8. General stores account.
 9. General balance.
 10. Comparative statement of averages.

The length of railway in operation during the year was 894 miles.

CAPITAL ACCOUNT.

The total cost of road and equipment on 30th June, 1888, was... \$45,887,759 20
 Less refunded on account of previous year's expenditure..... 1,110 30

\$45,886,648 90

The additions during the year are as follows:—

Halifax Extension.....	\$ 6,784 04
Increased accommodation, Halifax.....	2,798 23
do do St. John.....	2,452 69
do do Moncton.....	5,366 80
do do Maccan.....	2,999 60
do do Spring Hill.....	4,005 96
do do Rivière du Loup	1,701 17
Rolling stock.....	327,789 90
St. Charles Branch.....	135,060 74
Pictou Town Branch.....	65,474 27
Dartmouth Branch.....	18,119 99
Dalhousie Branch.....	17,400 00
Rivière du Loup Town Branch.....	6,357 14
Indian Town Branch.....	16,031 01
Appliances for heating cars by steam and light- ing them by electricity.....	41,047 91
Completion of the line between Rivière du Loup and Truro.....	2,948 98

656,338 43

\$46,542,987 33

The amount refunded on account of capital expenditure in previous years consists of small amounts for which cheques were drawn but were not issued.

The expenditure at Halifax was for a building of freight shed on one of the wharves.

The expenditure for increased accommodation at St. John was for the settlement of claims and legal expenses in connection with the works there.

The expenditure at Moncton was for the fitting up of the new workshop erected last year.

The expenditure at Maccan was for enlarging the yard to provide for the increased traffic coming from the Joggins Railway, recently opened for traffic, and which connects with the Intercolonial at that station.

The expenditure at Spring Hill was for enlarging the yard to accommodate the increased traffic from the Cumberland Railway.

The expenditure at Rivière du Loup was in payment of land for the branch line, and for additional machinery for the workshops.

The expenditure for rolling stock was to provide additional locomotives and passenger and freight cars, and two patent rotary steam snow-shovels.

The expenditure on account of the St. Charles Branch was for the payment of land claims, and for land, and for legal expenses; and also for the extension of the wharf at Lévis and the construction of a covered pontoon to facilitate the landing of passenger and freights.

The expenditure on the Pictou Town Branch was for the completion of that branch, for the extension of the wharf at Pictou, and the erection of a large freight shed upon it, and for providing rolling stock.

The expenditure on the Dartmouth Branch was to provide a locomotive, and to pay land and other claims in connection with the construction of the branch.

— The expenditure on the Dalhousie Branch was to provide the necessary rolling stock.

The expenditure on the Indian Town Branch was for land claims, and for the necessary rolling stock.

The fitting of the passenger train cars with apparatus for heating them by steam from the locomotive, and lighting them by electricity was continued, and the total number now fitted for electric light is fifty-six, and for steam sixty-three.

REVENUE ACCOUNT.

The expenditure and earnings for the year compare as follows:—

Expenditure.....	\$3,153,928 69
Earnings.....	2,895,364 35
	<u>\$ 258,564 34</u>

The gross earnings for the year were a little less than last year, as follows:—

Gross earnings, 1887-88.....	\$2,912,783 85
do 1888-89.....	2,895,364 35
	<u>\$ 17,419 50</u>

The decrease was in freight traffic.

There was an increase in passenger traffic of \$22,129.05.

The number of passengers carried compares as follows with the previous year:—

In 1888-89.....	1,091,189
In 1887-88.....	996,194
	<u>94,995</u>

The weight of freight carried compares as follows with the previous year:—

In 1887-88.....	Tons. 1,275,995
In 1888-89.....	1,204,790

The following is a comparative statement of a few of the chief articles of freight, showing the quantity carried in this and in the previous year:—

ARTICLES.	1887-88.	1888-89.	Increase.	Decrease.
Barrels of flour.....	845,750	927,014	81,264	
Bushels of grain.....	1,211,540	1,519,862	308,322	
Lumber, in feet.....	196,444,819	197,545,777	1,100,958	
Head of live stock.....	90,439	77,661		12,778
Other goods, in tons.....	909,487	814,993		94,494

The quantity of coal carried from the mines in Nova Scotia to the Upper Provinces was not quite as large as last year, as will be seen by the following comparative statement for the year which ended 31st December:—

1879.....	Tons. 570	1884.....	Tons. 112,898
1880.....	10,246	1885.....	165,791
1881.....	30,629	1886.....	175,512
1882.....	35,089	1887.....	192,022
1883.....	54,891	1888.....	173,732

WORKING EXPENSES.

The working expenses were somewhat less than last year, as will be seen by the following comparison:—

In 1887-88.....	\$ 3,276,441 61
In 1888-89.....	3,153,928 69
	<u>\$ 122,512 92</u>

They compare with last year's as follows per mile run by engines and by trains, and per mile of railway:—

Per mile run by engines:—	Cents.
1888-89.....	57.48
1887-88.....	<u>55.19</u>

Per mile run by trains:—

1888-89.....	68.69
1887-88.....	<u>66.33</u>

Per mile of railway:—

1888-89.....	\$ 3,527 88
1887-88.....	<u>3,723 23</u>

The necessary repairs were made to the permanent way and structures, and all the works of the railway were maintained in a state of efficiency.

The total number of new ties put into the track was 297,252. Ninety-one miles of track were reballasted. Forty-six sidings were put in at various points to accommodate the traffic. One hundred and twenty-nine miles of the main track were re-laid with heavier steel rails.

The fences received necessary repairs, and one hundred and sixteen miles of fences were built.

The snow sheds received necessary repairs, and two thousand five hundred and ninety lineal feet of sheds were re-built.

In addition to the repairs of snow fences, twenty-one thousand nine hundred and seventy-nine lineal feet of snow fences were built.

The buildings on all parts of the line were repaired; four station houses, one freight house, and some smaller buildings were erected. At Rivière du Loup an addition, built of brick, was made to the station house, to provide more commodious offices for the superintendent and the train despatchers.

In order to provide for the greater security of the travelling public, interlocking signals and switches were placed at the point where the Buctouche and Moncton railway crosses the Intercolonial.

Twenty-one semaphore signals were erected at various stations.

The wharves at the several shipping stations received all necessary repairs, and at some points these repairs and renewals were quite extensive.

The bridges and culverts on all parts of the line were kept in good repair.

A large expenditure was made in strengthening the bridges over the Miramichi River. Two over-head bridges of wood requiring renewal were replaced by substantial structures of iron, supported on foundations of masonry.

The rolling stock received necessary repairs, and is in good order.

Four new and more powerful locomotives were purchased to replace an equal number of lighter ones taken out of service.

Four passenger train cars, one hundred and eighteen freight cars and vans, and five snow ploughs, were purchased to replace an equal number taken out of service because unfit for use. These new freight cars were each of twenty tons capacity, while the cars they replaced had only a capacity of ten tons each.

The water service was efficiently maintained, and numerous improvements were made.

STORES.

The value of stores purchased was.....	\$1,285,888 84
The value of stores used was.....	1,243,605 03
The value of old material sold was.....	150,533 88

The value of stores on hand at the end of the year was :—

Ordinary stores, including fuel.....	353,143 38
Iron and steel rails and fastenings.....	190,307 63
Old materials for sale.....	48,993 25
	<u>\$592,444 26</u>

GENERAL.

The winter of 1888-89 was mild, and very little delay was experienced from snow storms.

On the 20th of June, 1889, the Debert River, swollen by heavy rains, washed out an embankment near Debert station. This delayed the traffic for a day or two, until temporary repairs were made.

The Canadian Pacific Railway "Short Line" from Montreal to St. John was opened for passenger traffic on Monday, 3rd June, 1889. This caused a re-arrangement of the passenger train service.

I have the honour to be, Sir,

Your obedient servant,

D. POTTINGER,

Chief Superintendent.

COLLINGWOOD SCHREIBER, Esq.,

Chief Engineer and Gen. Manager Government Railways,
Ottawa.

No. 2.—INERCOLONIAL RAILWAY.

Dr.

REVENUE ACCOUNT, Year ending 30th June, 1889.

Cr.

Previous Year.	Expenditure.	Year ending 30th June, 1889.	Previous Year.	Earnings.	Year ending 30th June, 1889.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
1,135,325 00	Locomotive power, Abstract No. 1	1,107,338 19	845,041 65	Passenger traffic..	867,170 70
769,155 84	Car expenses, Abstract No. 2....	686,862 62	1,909,842 04	Freight do...	1,882,361 01
811,225 31	Maintenance of way and works, Abstract No. 3.....	789,678 18	157,900 16	Mails and sundries.	145,832 64
377,969 18	Station expenses, Abstract No. 4.	369,874 54	2,912,783 85		2,895,364 35
174,809 23	General charges do 5.	178,808 09	363,637 76	Balance	258,564 34
3,268,484 56		3,132,561 66			
7,957 05	Car mileage.....	21,367 03			
3,276,441 61		3,153,928 69	3,276,441 61		3,153,928 69

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 3.—INTERCOLONIAL RAILWAY.

LOCOMOTIVE POWER—(Abstract No. 1).

Previous Year.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
10,436 35	Mechanical Superintendent's salary, clerks, office and travelling expenses..	10,345 90
234,682 95	Wages, drivers, firemen and cleaners.....	221,856 16
463,604 82	Fuel.....	437,882 58
51,635 80	Oil, tallow, waste and small stores.....	49,058 00
290,220 04	Repairs to engines, tenders and engine tools.....	296,625 82
40,452 73	Water, including pump and tank repairs	38,480 40
44,292 31	Miscellaneous.....	53,089 33
1,135,325 00		1,107,338 10

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 4.—INTERCOLONIAL RAILWAY.

CAR EXPENSES—(Abstract No. 2).

Previous Year.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
102,375 31	Repairs to passenger cars.....	82,614 69
47,820 95	do postal, express and baggage cars.....	28,113 94
254,493 65	do freight cars and vans.....	218,581 75
250,266 85	Wages of conductors, train baggage masters and brakemen.....	238,168 33
36,703 85	Oil and waste for packing.....	36,112 66
57,132 35	Small stores and fuel.....	61,792 43
20,354 88	Miscellaneous.....	21,478 86
769,155 84		686,862 66

THOMAS WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 5.—INTERCOLONIAL RAILWAY.

MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Previous Year.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
6,752 57	Chief and Assfstant Engineers, Salaries, Clerks, office and travelling expenses	6,595 66
315,899 33	Wages in repairing roadway, fences and semaphores, including new sidings laid in.....	339,861 97
38,127 28	Rails and fastenings, including new sidings laid in.....	42,276 02
71,553 27	Ties.....	63,408 37
160,739 34	Timber, lumber, &c., for repairs to bridges, cattle guards, crossings, snow-sheds, fences, &c.....	172,010 13
36,072 19	Repairs to wharves.....	30,314 76
85,673 84	Repairs to buildings and platforms, including extensions of and additions to same.....	68,838 05
26,141 43	Repairs to snow ploughs, flangers and tools.....	19,803 54
67,781 25	Clearing ice and snow.....	43,032 70
2,484 81	Miscellaneous.....	3,536 98
811,225 31		789,678 18

THOMAS WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 6.—INTERCOLONIAL RAILWAY.

STATION EXPENSES—(Abstract No. 4).

Previous Year.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
293,981 79	Salaries and Wages of Station Masters, Agents, Clerks, Telegraph Operators, Station Baggage Masters, Yard Masters, Switchmen, Watchmen and Laborers	284,717 53
83,987 39	Fuel, oil, light, stationery, tickets and other incidental expenses	85,157 01
377,969 18		369,874 54

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 7.—INTERCOLONIAL RAILWAY.

GENERAL CHARGES—(Abstract No. 5).

Previous Year.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
65,601 92	Chief Superintendent, District Superintendents, Train Despatchers, General Freight Agent, General Passenger Agent, Clerks, office and travelling expenses	65,989 16
25,072 04	Accounting Department—Salaries of the Chief Accountant and Treasurer, Traffic Auditor, Paymaster, Cashier, Clerks, office and travelling expenses	22,533 44
13,222 71	Damages to men, animals and goods	9,709 49
16,580 52	Ferry service	12,615 68
619 98	Telegraph expenses (not including pay to operators)	703 34
38,814 91	Miscellaneous—Printing, advertising, &c.	52,112 57
14,897 15	Agency expenses	15,144 41
174,809 23		178,808 09

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 8—INTERCOLONIAL RAILWAY.

[illegible]

THOMAS WILLIAMS,

Chief Accountant and Treasurer:

MONCTON, N.B., 30th June, 1889.

No. 9.—INTERCOLONIAL RAILWAY.

Dr.

GENERAL BALANCE, Year ending 30th June, 1889.

Cr.

	\$	cts.		\$	cts.
Cash.....	740	31	Dominion of Canada.....	746,029	05
General Stores:—			Suspense.....	2,725	28
Ordinary stores, including fuel.....	\$353,143	38	Unclaimed freight.....	441	33
Iron and steel rails and fastenings.....	190,307	63	Grand Trunk Railway, traffic.....	\$6,942	20
Old material for sale.....	48,993	25	do.....	2,261	81
Stations.....			Delaware, Lackawana and Western Railway.....	9,204	01
Rents.....			Bay Chaleur Railway.....	10	00
Accident insurance.....			Carleton Branch Railway.....	0	25
Department Accounts:—			Prince Edward Island Steam Navigation Co.....	396	76
Militia.....	\$3,279	06	Ontario Car Co.....	49	32
Agriculture.....	2,471	47		176	75
Marine and Fisheries.....	9	06			
Post Office.....	1,828	75			
Canadian Pacific Railway, rolling stock.....					
Oxford and New Glasgow Railway.....	7,588	34			
Chatham Branch Railway.....	22,046	19			
Kent Northern Railway.....	3,470	75			
Northern and Western Railway, traffic.....	1,120	73			
do.....	83	49			
Quebec Central Railway.....					
Windsor Branch Railway.....	2,522	14			
Temiscouata Railway.....	2,774	69			
Windsor and Annapolis Railway.....	2,003	37			
Central Railway of New Brunswick.....	35	04			
Canadian Pacific Railway.....	377	70			
New Brunswick.....	272	79			
Buctouche and Moncton Railway.....	29	47			
Albert Railway.....	88	49			
Prince Edward Island Railway.....	9	15			
Maine Central Railway.....	194	02			
Joggins Railway.....	15	92			
New Brunswick and Prince Edward Railway.....	2,154	25			
Caraguet Railway.....	4	07			
International Railway.....	310	98			
Elgin, Petibodiac and Havelock Railway.....	13	25			
Western Counties Railway, general.....	74	70			
do.....					
Spring Hill and Parrsboro' Railway.....	17,550	77			
Halifax and Cape Breton Railway.....	3,161	99			
	1,546	82			

Elgin Branch Railway.....	726 10
Cumberland Railway and Coal Co.....	44 87
Armour Refrigerator Line.....	11 50
Intercolonial Express Co.....	3,560 35
Pullman Car Co.....	1,093 45
Allan Steamship Line Co.....	1,892 13
National Despatch Line.....	20 00
Steamer "Admiral".....	6,032 22
Steamer "Contest".....	2,356 25
Acadia Coal Co.....	5,203 15
Intercolonial Coal Co.....	489 98
Londonderry Iron Co.....	15 80
Union Bearing Co.....	928 18
Halifax Cotton Co.....	9,612 52
Halifax Rolling Mills.....	10 00
Coldbrook Rolling Mills.....	1,967 41
Town of Dartmouth.....	12,000 00
Canadian Locomotive and Engine Co.....	1,236 74
Western Union Telegraph Co.....	19 00
Great North-West Telegraph Co.....	5 75
International Steamship Co.....	13 55
Remittances destroyed.....	788 81
Schooner "Mary Jane".....	71 30
Glengarry Station.....	5 00
Bloomfield Station.....	25 21
Coal Branch Station.....	65 84
Weldford Station.....	55 00
Ste. Luce Station.....	80 00
Bic Station.....	22 00
St. Arsene Station.....	6 11
McElroy Car Heating Co.....	18 00
Westinghouse Air Brake Co.....	140 00
Individual accounts.....	8,504 36
	759,032 75

759,032 75

THOS. WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 10.—INTERCOLONIAL RAILWAY.

COMPARATIVE STATEMENT of Averages, Year ending 30th June, 1889.

	1889.	1888.
Mileage of railway.....	894	880
Engine mileage.....	5,486,856	5,936,035
Train do.....	4,591,087	4,939,253
Car do.....	54,322,712	56,608,930
Receipts per engine mile.....Cents.	52·77	49·07
do mile of railway.....Dollars.	3,238·66	3,309·98
Percentage of passenger earnings to gross earnings.....	29·95	29·01
do freight do do.....	65·01	65·57
do other do do.....	5·04	5·42
Expenses per engine mile—		
Drivers, firemen and cleaners' wages.....Cents.	4·04	3·95
Fuel.....	7·98	7·81
Oil, tallow, waste and small stores.....	·89	·87
Repairs to engines.....	5·41	4·89
Water and tank repairs.....	·70	·68
Miscellaneous.....	·97	·75
Total.....	19·99	18·95
Mechanical Superintendent's salary, office and travelling expenses.....	·19	·17
Total.....	20·18	19·12
Locomotive power per engine mile.....	20·18	19·12
Car expenses do.....	12·52	12·96
Maintenance of way and works do.....	14·39	13·67
Station expenses do.....	6·74	6·37
General charges do.....	3·26	2·94
Car mileage.....	Add 57·09	Add 55·06
Total per engine mile.....	57·48	55·19
Locomotive power per train mile.....	24·12	22·98
Car expenses do.....	14·96	15·57
Maintenance of way and works do.....	17·20	16·43
Station expenses do.....	8·06	7·65
General charges do.....	3·89	3·54
Car mileage.....Add.	68·23	66·17
Total per mile train.....	68·69	66·33
Working expenses per mile of railway.....	3,527·88	3,723·23

THOMAS WILLIAMS,
Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

INTERCOLONIAL RAILWAY.

CHIEF ENGINEER'S OFFICE,
MONCTON, N.B., 10th September, 1889.

SIR,—I have the honor to submit my report of the Engineering Department for the year ending 30th June, 1889.

TRACK.

The mileage of the main line and branches remains the same as reported last year—894 miles.

During the year 129 miles of steel rails, weighing 56 pounds to the yard, were taken up and replaced with new steel rails weighing 67 pounds to the yard.

Four and-a-half miles of 4-inch Barrow rails were taken up on the Western Division and replaced with picked 4½-inch steel rails taken up on the Northern Divisions.

TIES.

During the year, 297,252 ordinary ties and 150 sets of switch ties were renewed.

BALLASTING.

About 125,000 cubic yards of ballast were used during the year on 91 miles of track.

SEMAPHORE SIGNALS.

Nine electric semaphore and twelve of Piper's semaphore signals were put up during the year between St. Flavie and Truro.

One of Saxby & Farmers interlocking machines (locked electrically), and supplied by the Union Switch and Signal Company, was put up at the level crossing of the Buctouche and Moncton Railway with the Intercolonial, 2 miles east of Moncton, at a cost of \$3,847.94.

Two sections of Gould & Tisdale's Automatic Electric Block System was put on trial between Sackville and Dorchester near the close of the year.

SIDINGS.

Forty-six sidings have been put in at various points throughout the line, making additional accommodation to the extent of 23,221 feet.

FENCING.

One hundred and six miles of new wire fencing were erected, and about 10 miles of the old barb wire fence, with the posts sunk in the ground, were taken down and rebuilt on posts framed into sills.

About 30 miles of the new fence was put up on parts of the line that had never been enclosed before.

The expenditure for fencing the past year was \$78,689.32, as against \$86,836.68 the year previous.

SNOW SHEDS AND SNOW FENCES.

On Northern Division, No. 3, 1,790 lineal feet of snow sheds were entirely renewed, and about 1,200 feet was thoroughly overhauled and repaired.

At St. Charles, 800 lineal feet of snow shed was re-built.

21,979 lineal feet of new snow fencing was erected on Northern Divisions 2, 3 and 4; \$21,938.15 has been expended during the year in the maintenance of snow sheds and snow fences.

WHARVES AND TRESTLES.

At the Deep Water Terminus, Halifax, the wharf and trestle approach were overhauled and repaired and a number of new piles put in. A portion of the top was also re-covered.

At Richmond the renewal of the wharf and coal trestles referred to in my report of last year was completed.

The lumber wharf was re-covered and a pile foundation put in for freight shed, 336 by 45 feet.

At Pictou Landing large repairs were made to the East Wharf. At Pictou an extension of 151 feet by 82 feet was made to the old wharf. It was built of creosoted piling and pitch pine capping, braces, &c.

The old wharf was repaired and a large portion of it re-covered.

Two crib and stone winter landings were provided at Marr's Slip and Collrain street, to enable teams to get on and off the harbor during winter.

At Sackville and Dorchester necessary repairs were made to wharves and coal chutes.

At Point du Chene, Moncton and St. John necessary repairs were made to wharves and trestles.

At Dalhousie some damage caused by the ice to wharf was made good.

At Rimouski large repairs were made to wharf by contract at a cost of about \$12,000. It is a very old structure, and will require further repairs almost immediately.

At St. Charles the coal trestle was partially renewed.

At Levis wings were built on either side of the railway wharf and a covered pontoon, with moveable bridge connecting it with the wharf, was provided at a cost of \$27,000.

BUILDINGS AND PLATFORMS.

At Halifax necessary repairs were made to the freight sheds and elevator at the Deep Water Terminus.

At Richmond a freight shed, 336 by 45 feet, was erected on the lumber wharf to provide accommodation for the increasing sugar business.

The cattle pens were rebuilt.

The car shops were repaired and painted. One side of the roof of Windsor and Annapolis freight shed was re-covered.

At Wellington the tool-house and platform were renewed.

At Enfield the tool-house was renewed.

At Shubenacadie, Brookfield and Truro the station buildings were overhauled and repaired.

At Johnston's, Gordon Summit and Lansdowne new platforms were erected.

The following stations were repaired and painted on the Eastern Division :—

Windsor Junction,

Valley,

Enfield,

West River,

Shubenacadie,

Glengarry.

Johnson's,

At Pictou a new freight shed, 149 feet by 48 feet, was erected on the wharf extension above referred to, for the accommodation of the Prince Edward Island business which was transferred from Pictou Landing after the completion of the Pictou Town Branch.

The old building formerly occupied as a freight shed was removed to another site and converted into a coal shed.

A new wing, 16 by 22 feet, was added to the lately erected brick-cased station for a ladies' waiting-room, the old room being used for an enlargement of the station-master's and clerk's office.

At Westville an extension of 20 to 30 feet was made to the freight shed.

At Stellarton the old station was moved across the track and converted into a double tenement house, which is occupied by employes who pay rent.

At New Glasgow a track store room, 25 by 15, was erected.

The stone station was overhauled, painted, and the wood work painted.

The freight shed was also repaired, and 450 feet of freight and loading platform renewed.

At Pictou Landing new sills were put under the station and windows repaired. The roof of engine house was repaired.

The following stations on the Central Division between Truro and Painsec Junction were repaired and painted :—

Folly Lake,	Spring Hill,
Wentworth,	Athol,
Westchester,	Aulac.

At Spring Hill a new freight shed was erected and the old one converted into a baggage room and lamp room.

The roof of the engine house was re-shingled. New floors were laid in the office and waiting-room of the station. The old baggage room was moved and converted into a coal house.

At Maccan the station was re-shingled, and clapboards, &c., repaired.

New tool houses for trackmen were built at Debert, Nappan and Dorchester.

At Amherst a bay window was put in the dining saloon and front vestibule was re-built, having blown down in a gale of wind.

At Sackville the freight shed was raised up and a new foundation put under it and a new floor in it.

New loading platforms were built at Belmont, Maccan and Nappan.

Platforms at Amherst, Sackville, Memramcook and Painsec were almost wholly renewed.

Repairs were made to platforms at Belmont, Debert, Londonderry, River Philip, Salt Springs, Athol and Aulac.

At Poilet River and Dunsinane flag stations were erected.

The following stations on the Western Division were repaired and painted :—

Point du Chene,	Sussex,
Salisbury,,	Bloomfield,
Dusinane,	Quispamsis ;
Penobsquis,	

and a tenement house at St. John.

Armour's tank, on the Shediack Branch, destroyed by fire, was re-built.

At Moncton the twelve tenement houses occupied by Mechanics were raised up, new foundations put under them, the clapboards repaired, the roofs shingled and the exterior walls painted.

The floors of machine and paint shops were renewed.

A new building, 30 by 20 feet, for the electric light plant and apparatus was erected.

The general waiting room and delivery room of station were sheathed up 8 feet from the floors.

At Hampton the old coal shed was taken down and removed to Bloomfield.

The following platforms were renewed and repaired :—

Point du Chene, repaired,	Petitcodiac,	renewed
Shediack, do	Anagance,	do
Moncton, do	Dunsinane,	do
Boundary Creek, do	Sussex,	do
Poilet River, renewed.	Norton,	do

At Berry's Mills the approaches to loading platform were renewed.

At Coal Branch the roof of tank house was renewed and the station repaired.

At Barnaby River the section foreman's house was repaired and roof re-shingled.

At Chatham Junction the old baggage room was converted into an enlargement of the freight house.

The following stations were painted between Moncton, and Campbellton :—

Canaan,	Bathurst,
Coal Branch,	Dalhousie Junction,
Barnaby River,	Dalhousie.
Bartibogue,	

At Gloucester Junction a new station and freight house were erected to replace those destroyed by fire at a cost of \$2,468.

At Nash's Creek a new station was erected.

Necessary repairs were made on the station at Bathurst, Petit Roche and Jacquet River.

Passenger platforms were renewed and repaired at the following places :—

Bartibogue,	renewed.	Beaver Brook,	repaired.
Red Pine,	do	Belledune,	do
Petit Roche,	do	Jacquet River,	do
Charlo,	do	New Mills,	do

A new loading platform, 300 feet long, was erected at Bathurst.

At Moffat's a new station and platform were erected.

At Millstream, a new station and platform were erected in place of those destroyed by fire.

General repairs were made to the following stations; Campbellton, Metapedia, Assametquagham, St. Octave and St. Flavie.

Terra Cotta smoke stacks were put up on the round house at Campbellton in place of the iron ones rusted out.

The following stations were painted between Campbellton and Rivière du Loup :—

Cedar Hall,	Bic,
Sayabec,	Isle Verte.
Rimouski,	

At Rimouski necessary repairs were made to the station, and the platform was renewed.

At Trois Pistoles the platform was renewed.

At Rivière du Loup an addition was made to the station, to provide office accommodation for the superintendent and train despatchers. The old building occupied by the train despatchers was re-arranged and converted into a baggage room.

The following platforms were renewed and repaired :—

Rivière du Loup,	renewed.	St. Anne,	repaired
St. Paschal,	do	Elgin Road,	do
Trois Saumons,	do	L'Islet,	do
Cap. St. Ignace,	do	L'Anse à Gile,	do
St. Thomas,	do	St. Valier,	do
Chaudière Junction,	do	St. Charles Junction,	do
Etchemin,	do	Chaudière.	do
River Ouelle,	repaired.		

The interior walls and ceilings of Harlaka station, first and second floors, were sheathed with pine, it being impossible to keep this building from heaving and breaking the plaster.

At Hadlow the house occupied by the mechanical foreman was thoroughly overhauled, repaired and painted.

At Levis a building 76 feet by 30 feet was erected, for charging batteries in connection with the electric lighting of cars.

At Quebec City an extension was made to the baggage room.

The second flat of the station building at Lévis was fitted up for a restaurant.

Large repairs were made to the tenement buildings at Chaudière Junction.

BRIDGES AND CULVERTS.

At Richmond 150 feet of brick sewer was renewed, at a cost of \$2,300.

The following box culverts were renewed on the Eastern Division :—

One 24 feet long, 4x2½, Shubenacadie.

78	do	do	Stewiacke.
25	do	do	do
22	do	do	do

At Smelt Brook, near New Glasgow, an 8 foot arch culvert was extended 18 feet, to enable a through siding to be put in to the steel company's works.

Three 4 by 2½ box culverts were renewed on the Western Division, and a large number of bridges and culverts overhauled and painted, a gang of masons being engaged at this work during the season.

A culvert was extended through the yard at Spring Hill Junction by using two old oil tanks set in cement.

A large expenditure has been made in strengthening the bridges of the North-West and South-West Miramichi.

The floor beams have been strengthened and a complete new system of lateral bracing has been provided.

The labor and materials for this work have cost \$25,400.

The old over-bridges at Tête-à-Gauche and Little River roads, one and two miles respectively, north of Bathurst, were replaced with iron spans built on first-class masonry at a cost of \$3,591.

A portion of Tartague tunnel having caved in it was decided to line it with masonry. After about 100 feet of it had been lined a further fall occurred which rendered it impracticable to complete the lining, and the tunnel is now being changed into an open cutting.

The Howe truss of two spans of 100 feet (built in 1872) at Isle Verte, has been replaced by two steel spans of the same length. The new bridge is of the heaviest type, furnished with standard top and angle guard rail, &c.

The following swing bridges were overhauled, scraped and painted :—

Overhead Bridge, Quispamsis station, Ham-			
mond River Bridge.....			
Pass-keag	do	3 Spans.	100 feet.
Seadanc	do	1 do	86 do
Tête-à-Gauche	do	4 do	66 do
Causapscal	do	5 do	100 do
Indian Brook	do	3 do	100 do
River Ouelle	do	3 do	50 do
St. Thomas Bridges	do	10 do	40 do
St. Henri Bridge	do	15 do	60 do
Etchemin	do	6 do	100 do
do	do	1 do	170 do
do	do	1 do	50 do

Additional lateral bracing was provided for the following bridges :—

Elm Tree.....	1 Span.	80 feet.
Nicodoo.....	1 do	80 do
McKinnon's Brook.....	2 do	80 do

The following deck bridges were raised ; stone and standard floors put on :—

Nepisiquit.....	6 Spans.	100 feet.
Belledune.....	2 do	60 do
Eel River.....	3 do	60 do
Mill Creek.....	3 do	60 do
Moffit's Bridge.....	8 do	60 do
Gilmour's Brook.....	1 do	60 do
McKinnon's Brook.....	2 do	80 do
Bridge 4 miles west of Rivière du Loup.....	1 do	46 do

The old cross ties were taken off the following bridges and standard floors put on :—

Stewart's.....	1 Span.	40 feet.
Enfield	1 do	112 do
East River.....	4 do	80 do
Debert.....	2 do	100 do
Sodom Bridge.....	1 do	50 do
River Philip Bridge.....	3 do	100 do
Little Forks do	1 do	100 do
McManns' do	1 do	50 do
Trout Creek do	3 do	86 do
Moose Horn do	1 do	86 do
Hammond River do	3 do	100 do
Kane's Brook do	1 do	25 do
Clarke's Brook do	1 do	60 do
Mill Stream do	4 do	100 do
Adams' do	3 do	100 do
Indian Brook do	3 do	50 do

The following bridges were thoroughly overhauled and all loose rivets replaced :—

Nicodoo Bridge.....	1 Span.	80 Feet.
Elm Tree do	1 do	80 do
Moffit's do	8 do	60 do
Gordon's do	1 do	60 do
Gilmour's Brook Bridge.....	1 do	60 do
Clarke's Brook do	1 do	60 do
Mill Stream do	4 do	100 do
McKinnon's Brook do	2 do	80 do
Adam's do	3 do	100 do
St. Henri do	6 do	100 do

GENERAL.

New track scales were provided at the following places—Point du Chene and Newcastle.

Those at St. John, Spring Hill and Moncton were taken up and sent to Montreal, thoroughly overhauled and repaired.

The one at Moncton was removed to a more convenient place to weigh, and a new foundation put in for it.

At Spring Hill, on account of the re-arrangement of the yard, it was also necessary to move the track scale and put in a new foundation.

A 30-feet cast iron turn-table was put in at Bathurst, also one at Causapscal.

The turntables at Truro, Spring Hill, Moncton, Newcastle, Campbellton and Rivière du Loup were strengthened on account of heavier locomotives being introduced.

About 200 pairs of cattle guards have been renewed throughout the line.

At Maccan the yard was enlarged to provide for the coal business coming from the Joggins Branch Railway lately constructed.

At Spring Hill a large addition was made to the siding accommodation and the tracks re-arranged to facilitate the shunting of trains.

I have the honour to be, Sir,

Your obedient servant,

P. S. ARCHIBALD,

Chief Engineer.

D. POTTINGER, Esq.,

Chief Superintendent Intercolonial Railway,
Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL SUPERINTENDENT,
MONCTON, N.B., 12th September, 1889.

SIR,—I beg to submit for your information the following statements of the operations of the mechanical department, for the year ending 30th June, 1889.

A.—Statement showing the number of locomotives and various classes of cars.

B.—Statement showing the locomotive and car mileages, and the average number of passenger and freight cars hauled per mile run by engines.

C.—Abstract of locomotive returns.

D.—Statement of the cost of locomotive power for each month during the year.

E.—General statement of the expenses of the mechanical department.

During the year, twelve locomotives, two first-class sleeping, six first-class passenger, four baggage and express, two hundred and thirty-three box, and twenty platform cars were purchased at cost of capital and added to rolling stock of the railway.

Three ordinary and two rotary steam snow ploughs, were also purchased at cost of capital. Four locomotives were purchased and charged to revenue, to replace four condemned.

Two second-class passenger, two baggage and express, one box, fifty-nine platform, forty-two gondola and ten platform cars, six vans, three ordinary and two wing snow ploughs, were also built from revenue, to replace others condemned.

The box and platform cars rebuilt were of twenty-tons capacity, replacing those of only ten tons.

In addition to this, two hundred and twenty-one box and other freight cars have had extensive repairs put on them, almost equal to rebuilding, and eighty-two cars have been strengthened to carry 34,000 lbs. instead of 20,000 and 24,000 lbs.

Twelve sleepers were thoroughly overhauled and painted, and three painted only.

Twenty-three first-class, twenty-one second-class, six postal and six baggage cars, were thoroughly overhauled and painted; while eight first-class, twenty-one second-class, seven postal and eight baggage cars received lighter repairs and painting.

Two hundred and eighty-seven freight cars of various kinds were re-painted. Old sleeper "Rover" was entirely remodelled, and renamed "Rimouski;" sixteen conductors' vans have been heavily repaired and re-painted; fifteen refrigerator cars were fitted with air brake and steam pipes and re-painted.

Three sleeping, nine first-class, thirteen second class, six postal and four baggage cars were fitted with electric lights; seven sleepers have been fitted with the "McIlroy" auxiliary steam-heating apparatus, and ten first-class, twelve second-class, four postal and four baggage cars were fitted with steam-heating devices.

Eight engines got new cabs, twenty-three new cylinders, thirty-eight smoke-box extensions, one new saddle, and three new tenders.

WATER SERVICE.

The necessary repairs were made to the water service during the year.

A number of the small tanks are getting in bad condition, and will have to be replaced during the ensuing year.

At Halifax, a portion of the pipe leading from the reservoir to the round house was taken up and re-laid in a more direct line, to prevent the accumulation of silt at the bends.

Windsor Junction—The tank at this place was raised to accommodate the increased height of the new tenders.

The trestle under tank at Alton was re-built.

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At Londonderry the trestle was repaired.

Penobsquis tank was raised.

At Metapedia a new trestle and second-hand tank were put in, to replace old ones.

At Trois Pistoles a new fifty thousand gallon tank was erected, to replace the old one, and a new reservoir made.

At River du Loup one thousand one hundred feet of 4-inch pipe was laid from near the station to the round house.

St. Moïse—Trestle repaired.

St. Paschal—New water valve at Crane.

Elmsdale—New trestle and new boiler.

The service at other stations has been well maintained.

I have the honor to be, Sir,

Your obedient servant,

H. A. WHITNEY,

Mechanical Superintendent.

D. POTTINGER, Esq.,

Chief Superintendent, Moncton.

STATEMENT showing the number of Locomotives and the various classes of Cars on the 1st July, 1888, and on the 30th July, 1889.

J. SUTTON,
Mechanical Accountant.

B.—INTERCOLONIAL RAILWAY.
STATEMENT OF Locomotive and Car Mileage for the Year ending 30th June, 1889.

Months.	Locomotive Mileage.		Car Mileage.					
	Passenger.	Freight.	Passenger.	Express Postal and Baggage.	Freight.	Total.	Snow Plough Mileage.	Average Freight. Passenger
1888—July.....	92,966	286,066	435,198	194,019	3,707,084	4,336,301	.....	6.77 12.96
August.....	95,128	303,909	452,332	196,204	3,994,336	4,642,872	.....	6.81 13.14
September.....	82,318	296,255	416,750	173,128	4,056,469	4,646,347	.....	7.16 13.72
October.....	86,577	339,004	379,804	182,569	4,753,131	5,315,564	129	6.56 14.00
November.....	78,656	309,733	346,355	175,016	4,281,504	4,802,875	831	6.62 13.82
December.....	70,550	328,113	330,767	181,437	4,093,246	4,605,450	5,478	7.25 12.47
1889—January.....	72,732	379,017	324,622	183,292	4,618,981	5,126,895	7,139	6.84 12.18
February.....	68,444	265,906	283,266	139,902	3,244,927	3,668,095	20,498	6.17 12.20
March.....	75,731	316,687	341,212	154,230	4,265,297	4,760,739	5,758	6.53 13.46
April.....	77,368	276,530	389,371	171,815	3,715,747	4,276,933	503	7.22 13.43
May.....	73,514	269,902	350,772	175,734	3,586,362	4,112,808	84	7.11 13.28
June.....	101,653	244,298	390,215	198,295	3,439,263	4,027,773	.....	5.69 14.08
Total.....	975,667	3,615,420	4,440,724	2,125,641	47,756,347	54,322,712	40,420	6.73 13.21

J. SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1889.

C.—INTERCOLONIAL RAILWAY.
ABSTRACT of Locomotive Returns for the Year ending 30th June, 1889.

Months.	Hours in Steam.	Locomotive Mileage.	Consumption.				Average Consumption per 100 Miles.				
			Tons of Coal.	Pints of Oils.	Pounds Tallow.	Pounds Waste.	Miles Run to hour in Steam.	Pounds Coal.	Pints Oil.	Pounds Tallow.	Pounds Waste.
1888—July.....	42,730	448,920	11,618	33,349	12,293	9,366	10 50	5,797	7 42	2 73	2 08
August.....	44,604	472,336	12,316	33,664	12,782	9,773	10 59	5,841	7 12	2 70	2 07
September.....	43,018	448,458	12,272	33,402	11,268	9,512	10 42	6,129	7 44	2 51	2 12
October.....	48,605	502,808	14,699	36,934	12,093	10,503	10 34	6,548	7 34	2 40	2 09
November.....	44,559	460,443	14,298	35,456	10,509	9,738	10 33	6,956	7 70	2 28	2 11
December.....	48,652	480,753	14,963	36,641	10,183	9,500	9 88	6,971	7 62	2 11	1 98
1889—January.....	53,397	539,075	16,788	43,123	12,146	11,452	10 09	6,976	7 99	2 25	2 01
February.....	42,587	412,277	13,295	35,317	7,914	9,418	9 68	7,223	8 56	1 92	2 28
March.....	45,856	469,340	14,491	37,998	9,290	9,998	10 23	6,916	8 09	1 98	2 13
April.....	40,420	422,680	12,060	30,181	8,088	9,283	10 45	6,391	7 14	1 91	2 20
May.....	39,633	414,115	10,606	34,744	7,810	9,492	10 44	5,737	8 38	1 88	2 29
June.....	39,111	415,651	10,501	36,163	8,802	9,500	10 63	5,659	8 70	2 11	2 28
Total.....	533,172	5,486,856	157,907	426,972	123,178	117,535	10 29	6,446	7 78	2 24	2 14

J. SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1889.

D.—INTERCOLONIAL RAILWAY.

STATEMENT of the cost of Locomotive Power for each month, from 1st July, 1888, to 30th June, 1889.

Months.	Miles run by Engines.	Mechanical Supt.'s Salary and Office Expenses.	Engine-men's wages.	Fuel.	Oil, Tallow and Waste.	Repairs to Engines, Tenders and Tools.	Water.	Miscellaneous, including Engine-houses.	Total.	Average per 100 Miles.						Total.	
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	Mechanical Supt., &c.	Wages.	Fuel.	Oil, Tallow and Waste.	Repairs.	Water.		Miscellaneous.
1888—July..	448,920	921 14	18,187 14	32,117	3,925 10	32,261 21	3,842 61	3,501 05	94,756 24	21 4	03 7	16	87	7 19	86	78 21	10
Aug..	472,336	1,088 61	18,732 28	33,679 64	4,200 74	26,163 14	1,353 31	3,117 78	88,335 50	23 3	97 7	13	89	5 54	28	66 18	70
Sept..	448,458	772 57	17,606 68	33,427 72	3,886 05	30,287 64	7,969 01	3,191 23	97,140 90	17 3	93 7	45	87	6 75	1 78	71 21	66
Oct...	502,808	790 96	19,219 42	40,325 76	4,361 63	51,101 07	3,242 97	7,181 48	126,223 29	16 3	82 8	02	87	10 16	64 1	43 25	10
Nov...	460,443	863 23	19,101 55	40,474 08	4,199 98	37,411 98	4,377 61	4,243 97	110,672 40	18 4	15 8	79	91	8 13	95	92 24	03
Dec...	480,753	790 72	18,673 39	41,051 31	4,057 65	23,774 45	3,086 61	6,788 51	98,222 64	16 3	89 8	54	84	4 95	64 1	41 20	43
1889—Jan..	539,075	798 84	20,428 78	46,285 22	4,958 98	17,001 60	2,584 58	5,214 25	97,272 25	15 3	79 8	59	92	3 15	48	96 18	04
Feb...	412,277	913 71	17,212 13	37,518 84	3,893 18	17,549 31	3,250 89	4,466 31	84,804 37	22 4	18 9	10	94	4 26	79 1	08 20	57
Mar...	469,340	915 41	19,871 74	41,210 30	4,202 83	17,142 14	2,046 11	4,231 60	89,620 13	19 4	23 8	79	90	3 65	44	90 19	10
April...	422,680	808 77	18,079 57	33,653 65	3,614 25	14,008 22	1,970 39	4,108 66	76,243 51	19 4	28 7	96	85	3 32	47	97 18	04
May...	414,115	796 27	17,180 69	28,712 90	3,706 20	19,361 05	2,613 09	4,085 43	76,455 63	19 4	14 6	92	89	4 67	63	98 18	42
June..	415,651	895 67	17,562 79	29,415 17	4,051 41	10,564 01	2,143 22	2,959 06	67,591 33	22 4	23 7	07	97	2 54	52	71 16	26
Total...	5,486,856	10,345 90	221,856 16	437,882 58	49,058 00	296,625 82	38,480 40	53,089 33	1,107,338 19	19 4	04 7	98	89	5 41	70	97 20	18

J. SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1889.

E.—INTERCOLONIAL RAILWAY.

GENERAL STATEMENT of the Expenses of the Mechanical Department, for the Year ended 30th June, 1889.

	\$	cts.
The miles run by trains.....	4,591,087	
do engines.....	5,486,856	
do cars.....	54,322,712	
do snow pioughs.....	40,420	
The cost of locomotive power.....	1,107,338	19
The cost of car repairs :		
Repairs to passenger cars.....	82,614	69
do postal, express and baggage cars.....	28,113	94
do freight cars and vans.....	218,581	75
Oil and waste for packing.....	31,686	51
Miscellaneous.....	680	19
Total cost of car expenses.....	361,677	08
The cost of locomotive power per 100 miles run by trains.....	24	12
do do do engines.....	20	18
do do do cars.....	2	04
The cost of repairs to cars per 100 miles run by trains.....	7	17
do do engines.....	6	00
do do cars.....	60	
The cost of oil and waste for packing per 100 miles run by trains.....	69	
do do engines.....	57	
do do cars.....	05	
The cost of repairs to passenger cars per 100 miles run by them.....	1	86
do postal, express and baggage do.....	1	32
do freight cars and vans do.....	46	

J. SUTTON,
Mechanical Accountant.

MONCTON, N.B., 30th June, 1889.

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INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada on the

Date,	Time of day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1888.						
July 10..	11.50	39	Freight	J. W. Henderson.....	John Morton.....	106
do 12..	9.00	Special	do	E. Thompson.....	N. Sinclair.....	119
do 12..	15.05	6	do	Geo. A. Chesley.....	C. McCarthy.....	48
do 15..	10.00	Special	do	F. Morency.....	L. Boule.....	130
do 24..	5.00		Shunting.....		Chas. McHugh.....	18
do 25..	16.00	60	Accommodation...	E. S. Vye.....	M. Fuller.....	169
do 26..	4.40	Special	Freight	T. C. Ayer.....	G. W. Anderson.....	68
do 27..	18.55	68	do	J. J. Daley.....	H. Smith.....	135
do 28..	17.00	Special	Ballast.....	D. McIntosh.....	N. Copeland.....	44
do 30..	19.00	do	Freight	P. Y. Christie.....	T. W. Hennessy.....	63
Aug. 4..	15.30		Shunting.....		Thos. O'Brien.....	11
do 10..		Special	Freight	W. McClafferty.....	R. Kennedy.....	88
do 14..	24.10	40	do	M. Cummings.....	D. McQuarry.....	170
do 15..	13.00	Special	Working	Geo. Sears.....	N. Sinclair.....	174
do 17..	15.00	do	Freight	W. Hains.....	E. Rushton.....	114
do 17..	17.10	49	do	Geo. Guay.....	W. Brock.....	141
do 20..	10.30	56	do	F. Ross.....	D. Duncan.....	70
do 22..	8.00	Special	do	W. M. Thompson.....	W. H. Anderson.....	61
do 23..	7.30	do	do	Alex. Mitchell.....	A. Scott.....	44
do 25..	1.40					
do 31..	8.20	33	Express.....	E. McKenna.....	H. A. Turner.....	162
Sept. 4..	18.00	9	do			
do 4..	13.25	27	do	W. Foster.....	J. H. Campbell.....	7
do 7..	16.00		Shunting		P. Fogarty.....	188
do 14..	13.10	Special	Freight	G. Margeson.....	M. White.....	80
do 15..	17.00		Shunting		R. James.....	100
do 17..	15.00					
do 21..	20.40	34	Express.....	N. E. Olive.....	W. Martin.....	154
do 24..	14.00		Shunting.....		R. James.....	100
do 26..	14.00					
do 27..	3.10	Special	Working	Geo. Conehy.....	J. Quinn.....	120
do 28..	9.40	Special	Shunting		W. Mackie.....	97
do 30..	4.30		do		O. Brock.....	96
Oct. 1..	14.30		do		D. McNeil.....	97
do 2..	10.00	Special	Freight	W. McDermott.....	O. McGinity.....	180
do 2..	19.00	do	Freight	J. L. Herbert.....	J. Oakleaf.....	138
do 3..	13.30		Shunting.....		W. Fraser.....	10
do 4..						
do 8..	18.40	Special	Freight	J. E. Evans.....	W. F. Hicks.....	113
do 16..	14.00		do	Jas. McDowell.....	G. Feetham.....	171
do 16..	14.10	Special	do	Jas. Daley.....	R. Smith.....	181
do 18..	14.45	do	do	John McDonald.....	W. Lovett.....	35
do 19..	10.45	do	do	E. Thompson.....	J. Donald.....	197
do 22..	9.00	do	do	J. Swetman.....	S. Wilson.....	128

RAILWAY.

Line of the Intercolonial Railway, during the Year ended 30th June, 1889.

Place of Accident.	Name of Person injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Campbellton....	(Mrs. Braham) (Mrs. Wilson.)	Neither....	{ Struck by engine while crossing track with team.	Slightly injured.	
Sackville	Geo. Stiles.....	Employé ...	While coupling.....	Body crushed...	
Nauwigewauk....	J. S. Nickerson..	do	While applying brake...	Arm sprained...	
St. Henri.....	N. Blais.....	do	While coupling.....	Fingers crushed...	
Moncton.....	J. Osborne.....	do	Fell off car.....	Ankle sprained...	
Near Derby Jct..	Jas. Lewis.....	do	do	Shoulder and head injured...	
Canaan.....	Jos. Poirier.....	do	While coupling.....	Fingers crushed...	
Elmsdale.....	B. McLellan.....	do	While releasing brake...	Back sprained...	
Near Pictou.....	Dan. Gillis.....	Neither....	Struck by engine.....	Arm broken.....	
Londonderry....	P. Y. Christie..	Employé ...	While releasing brake...	Sprained wrist...	
Halifax.....	Geo. Bowers.....	do	Fell between freight- house and car.	Hips injured....	
Spring Hill Jct..	Geo. Kenn.....	do	While coupling.....	Finger injured...	
Near Bartibogue	M. Cummings...	do	Torpedo exploded in van.	Leg injured....	
Salisbury.....	H. Boyce (boy)..	Neither....	Fell off flat car.....	Leg cut off....	
Newcastle.....	E. McAnn.....	Employé ...	Fell into gondola car...	Knee cut.....	
Chaudière.....	Arthur Cannie..	do	Fell between cars and run over by engine.	Fatal.....	Accidental.
New Glasgow....	— Patterson....	Neither....	Walking on track was struck.	Head cut.....	
Gloucester Jct..	J. S. Akern.....	Employé ...	While coupling.....	Arm crushed....	
New Glasgow....	Daniel Fraser...	do	do	Fatal.....	do
Berry's Mills...	H. England.....	do	Fell on track.....	Wrist fractured.	
Campbellton....	Henry Michaud..	do	Putting tool chest on train.	Stomach injured.	
Halifax.....	Harvey Brown..	Neither....	Fell or jumped off train.	Head injured...	
Near Pictou.....	James Fraser...	do	Walking on track was struck by engine.	Slightly injured.	
Moncton.....	Mickl. Wryn....	Employé ...	While coupling.....	Fingers crushed.	
Atkinson's.....	M. A. Fletcher..	do	do	Foot injured....	
St. John.....	Geo. Knowles...	do	While getting on engine.	Hand injured...	
do	John Quinn.....	do	While loading freight in car.	Back injured...	
Near Jacquet River.	— Miller.....	Passenger..	Jumped from train while in motion.	Seriously injured	
St. John.....	A. E. Wilson....	Employé ...	While coupling.....	Leg injured....	
Halifax.....	W. Parker.....	do	While unloading cattle...	Finger crushed..	
St. Valier.....	F. Morrisette...	do	Switch iamp fell.....	Hand injured...	
River du Loup..	Frank Fargue...	do	While shunting was run over.	Fatal.....	do
Chaudière.....	O. Brock.....	do	Attempting to extinguish fire in cab.	Hands and face burned.....	
River du Loup..	H. Laprise.....	do	While coupling.....	Collar bone broken.	
Amherst.....	W. Manship....	do	Fell between cars.....	Knee injured....	
Sayabec.....	Chas. Bélanger..	do	Rail fell on foot.....	Foot injured....	
Lévis.....	— Pelchat.....	Neither....	Fell between cars.....	Leg crushed....	
St. John.....	John Quinn.....	Employé ...	Attempting to move cask.	Arm broken.....	
W. of Bartibogue	E. Thompson....	do	Fell off train while in motion.	Head injured...	
Antigonish.....	W. H. Pushie...	do	While coupling.....	Knee injured...	
Spring Hill Jct..	A. W. Murray...	do	Fell off coal trestle....	Slightly injured.	
Stellarton.....	John McDonald..	do	While coupling.....	Fingers crushed..	
Aulac.....	Geo. Mills.....	do	do	Collar bone broken.	
Petite Roche...	W. Crossman...	do	Jumped from car and fell.	Knee injured...	

[1889]

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1888.						
Oct. 22.	21.30	Special.			B. C. Gesner.	183
do 25.	20.35	do	Freight	J. R. Dalton.	do	206
do 27.	12.15	do	do	John McDonald	{ C. Saunders	13 }
Oct. 27.	13.45	Special.	Freight	M. Marchessault.	{ J. Dean	124 }
do 3.					L. Michaud.	3
do 31.	23.00	10	Express	W. Kelly.	L. Belleau	28
Nov. 1.	17.00	24	Freight	J. Berry.	R. Carr	155
do 3.	6.00	39	do	A. McPherson.	G. A. Kentley	79
do 6.	15.05	1	Express	G. H. Trueman.	J. Morton.	34
do 7.	11.30	Special.	Freight	A. Copeland.	J. Stewart.	137
Nov. 8.	20.45		Shunting.		{ H. McPhee	22 }
do 9.	6.15	Special.	Freight	G. C. Keys.	{ J. Williamson	47 }
do 9.	10.00	do	do	A. Mitchell.	Geo. Currie	189
do 9.	22.15	do	do	W. Haines.	H. Cummings	136
do 9.	16.25	do	do	do	A. Scott.	7
do 13.	6.40				R. H. Coggon	30
do 13.	17.45	33	Express	M. Letarte	do	30
do 14.	10.20	2	do	G. H. Trueman.	J. McDonald.	157
do 17.	16.55	Special.	Working	L. A. Bélanger	T. Prince.	101
do 19.	17.52	1	Express	A. Rannie.	W. Duncan.	6
do 22.	7.00	Special.	Freight	John McDonald	T. W. Prince	151
do 23.	21.00		Shunting.		R. Lightbody.	72
do 27.	19.45	Special.	Freight	J. B. Crockett	C. McHugh.	68
do 28.	6.00	do	do	E. Rioux.	W. Grass.	179
do 28.	16.30		Shunting.		J. Devereaux.	148
Dec. 3.	11.45	23	Freight	G. W. McCally	John Brownell.	60
do 5.					C. Edwards.	4
do 7.	18.20		Shunting.			
do 7.	10.30				M. Normand.	16
do 8.	11.15	Special.	Freight	G. Margeson.	J. Donald.	197
do 10.	16.40	do	Working	L. A. Bélanger	W. Duncan	6
do 11.	2.00	Special.	Freight.	C. H. Bass	J. Cook.	34
do 12.	19.00	5	do	W. J. Campbell.	J. R. Moore.	46
do 13.	11.00		Shunting.		Jas. Stockall.	167
do 15.	7.15	Special.	Freight	G. McElkenney.	Ben. Cooke	69
do 20.	18.00	do	Plow train.	J. E. Evans.	{ E. Thomas	108 }
Dec. 21.	19.30		Shunting.		{ E. B. Price	115 }
do 22.	7.00		do		M. F. G'Brien	99
do 22.	12.00	37	Freight.	P. E. Hennie	J. W. Boyd.	95
do 24.	19.40	39	do	Jas. Card.	C. Atkinson	39
do 26.	13.00				W. Bell.	192

RAILWAY.

on the Line of the Intercolonial Railway, &c.—*Continued.*

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
Moncton	H. McPhee.....	Employé ..	Struck by engine.....	Severely injured.	
Sackville.. ..	Hugh Wright...	do	While shunting stepped into cattle guard.	Shoulder and arm broken.	
Elmsdale.....	F. Dickson	do	Whiles hunting got caught between cars.	Fatal.....	Accidental.
St. Valier	L. Langlols.....	Employé ..	Fell off cars and was run over.	do	do
Lake Side.....	D. Freeland	Passenger..	Lamp fell from top of car.	Nose cut.....	
Londonderry ..	J. McLeod	Employé ..	Slipped while unloading freight.	Leg injured....	
Near Newcastle.	J. Morton	do	Rocker arm broke.	Fingers injured.	
Boundary Creek.	D. Taylor.....	do	Fell off engine.....	Slightly injured.	
Beaver Creek...	E. Perkins.....	do	While coupling	do	
Halifax	J. McEachern ..	do	do	Hand injured...	
Stellarton	Hiram Ross.....	do	do	Fingers crushed.	
Glass Works....	D. McKenzie.....	do	do	do	
Chatham Jct....	C. Scarr	do	do	Hand crushed...	
Newcastle.....	C. Long	do	Fell between cars	Ankle and arm crushed.	
St. John.....	P. Driscoll.....	do	While lifting trunk.....	Back injured...	
Trois Saumons..	Frs. Bourgault..	Neither....	Struck by engine while crossing track with team.	Fatal	do
Near Moncton..	Mrs. Mitten ; Miss Lutes.	Passengers..	Jumped off train while in motion.	Considerably injured.	
Metapedia.....	Jos. Gallant....	Employé ..	While unloading rails ..	Leg broken	
Cold Brook.....	Naknonee	Stealing ride	Jumped off train in motion.	Seriously injured	
Dorchester.....	Jas. McLeod....	Employé ..	Foot caught in frog and car passed over him.	Fatal	do
Moncton	M. Harris.....	do	Fell while stepping off engine.	Knee injured ...	
E. of Dorchester.	Thos. Carrol....	do	Fell off tender and was run over.	Fatal	do
Millstream	D. McLaughlin..	do	Slipped and fell on oil can.	Throat injured..	
Moncton	Jas. Arbing.....	do	Fell while getting off engine.	Ankle sprained..	
Spring Hill Jct..	H. Patten	do	While unloading freight.	Hand sprained..	
St. John.....	R. McDonald....	do	While moving freight...	Foot injured....	
Chaudière.....	Pierre Demers..	do	While coupling.....	Fingers crushed.	
Trois Pistoles..	P. P. Michaud....	do	While unloading freight.	Leg broken	
Spring Hill Jct..	Thos. Snodgrass.	do	While coupling.....	Hand crushed...	
Berniers	Jos. Normand ..	do	do	do	
Spring Hill Jct.	Ernest Smith...	Employé ..	While coupling.....	Fingers crushed..	
Pt. du Chêne...	M. Scarr	do	do	do	
Halifax.....	T. W. Ridgeway	Neither....	Attempting to cross between cars.	Foot injured....	
Johnson	R. Copeland....	Employé ..	While coupling.....	Leg injured....	
2 miles E. Gloucester Jct.	F. Le Tourneau.	Neither....	While walking on track was struck by plow.	Leg broken	
do	Philip Theberge.	do	do	Head injured...	
Moncton.....	J. Dunlop	Employé ..	While coupling.....	Fingers crushed.	
Truro	N. H. Hopper....	do	do	Hand crushed...	
Chatham Jct....	C. Smallwood....	do	While cleaning ash pan..	do	
Canaan.....	T. W. Hennessy.	do	Slipped while getting off engine.	Leg injured....	
Near Truro.....	Wm. Bokleman..	do	Found dead on track from natural causes.	Natural causes..	

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1888.						
Dec. 27.	15.30	1	Express.	G. H. Trueman.	Wm. Wall.	57
do 29.	10.40		Shunting.		J. Code.	18
do 31.	22.40	47	Freight.	B. Walker.	F. Sheedy	130
1889.						
Jan. 1.	12.12	24	Freight	W. J. Dickson	C. Edwards	34
do 4.	11.00		Shunting		Jas. Fahey.	131
do 8.	11.50		do		M. Tobie.	189
do 11.	3.00					
do 14.	1.10	Special.	Freight	G. C. Keys.	J. J. Smith	135
do 15.	20.30	do	do	Jas. Daley.	J. J. Smith	183
do 16.	22.00	do	do	J. Craigie	W. Coffey	103
do 17.	3.00	do	do	J. Paradis.	A. Jolivet	146
do 18.	14.30	6	do	W. J. Campbell.	J. Gilfillan.	53
do 19.	14.00	37	do	Jas. Graves	Jas. Stratton	144
do 19.	22.00		Shunting		Chas. M. Hugh.	18
do 20.	4.00	Special.	Freight.	W. Q. Treen	W. G. Bell.	187
do 22.	7.00		Shunting		J. W. Boyd.	95
do 26.	4.50	Special.	Freight.	G. Mayerson	D. Yould	39
do 30.						
do 31.	3.00	Special.	Freight.	G. Lamkee.	W. E. Hunter	40
Feb. 2.	13.30		Shunting.		Geo. Sears.	94
do 2.						
do 8.	14.55	31	Express.	J. McFadyen.	J. H. Moore.	11
do 7.	15.00		Shunting		A. McDonald	71
do 8.	10.30	38	Freight	D. Hunter	A. McCabe.	61
do 9.	9.30	Special.	do	T. A. Moreau.	A. Chenier.	159
do 11.	14.45	38	do	E. L. Watts		
do 16.	16.10	1	Express	G. H. Trueman.	J. Stewart.	68
do 23.	11.10	Special.	Plow train.	E. S. Vye	H. Malthy.	169
Feb. 25.		do	Freight	H. Archibald.		
Mar. 12.	7.10	1 G.T.R.	Express	J. Tardiff.	— Gosselin.	89
do 13.	4.30		Shunting		C. McHugh	18
do 14.		Special.	Freight.	G. C. Keys.		
March 15.	17.30	Special.	Freight	A. B. Vance	M. White.	13
do 19.	11.05	33	Express	M. Letarte	H. Whitney	160
do 19.	11.05	Special.	Freight	H. Michaud	A. Jollivette.	146
do 26.	23.00	Special.	Freight	A. B. Vance	J. J. Ferguson	99
do 27.	17.45		Shunting		J. McDermott.	91
April 1.	7.00	Special.	Freight	W. L. Broad	N. Sinclair	95
do 3.	15.00		Shunting		J. W. Boyd.	52
do 3.	10.15		do		W. Appleton	
do 4.	21.00		do			
do 5.	13.30					
do 8.	22.10	33	Express	P. Corbett.	W. D. Martin	154
do 11.	17.00					176
do 12.	22.55				B. C. Gesner.	164

RAILWAY.

on the line of the Intercolonial Railway, &c.—*Continued.*

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accidents.	Extent of Injury.	Verdict of Coroners' Jury.
Cook's Brook...	R. Casey.....	Neither.....	Struck by engine while crossing track.	Fatal.....	Accidental.
Moncton.....	F. Cormier.....	Employé.....	While coupling.....	Fingers crushed.	
St. Alexander..	F. Turcotte.....	do.....	While loading freight...	Hand cut.....	
Maccan.....	W. J. Dickson...	do.....	Collided with special train	Shoulder injured	
Ste. Flavie.....	F. LeBel.....	do.....	While coupling.....	Hand injured....	
Richmond.....	W. Pickering...	do.....	While attempting to turn points.	Back strained...	
Ste. Flavie.....	A. Wright.....	do.....	Fell off station platform.	Knee injured...	
Truro.....	A. McGrath.....	do.....	While turning switch....	Fingers crushed.	
Painsec Jct.....	D. Sullivan.....	do.....	While coupling.....	do.....	
Greenville.....	J. Craigie.....	do.....	Stepped into drain in yard	Leg bruised.....	
Ste. Luce.....	A. Dumas.....	do.....	Struck by semaphore lever	Arm injured.....	
Coldbrook.....	J. Nickerson...	do.....	Jumped off train.....	Ankle sprained...	
Red Pine.....	E. C. Belliveau..	do.....	While shunting.....	Fingers crushed.	
Moncton.....	J. Melanson.....	do.....	do.....	Arm injured.....	
Weldford.....	W. Campbell.....	do.....	While coupling.....	Body injured....	
Truro.....	N. Hopper.....	do.....	do.....	Hand crushed...	
Londonderry...	H. Potton.....	do.....	Fell off engine.....	Legs injured....	
Sussex.....	Chas. Chestnut...	do.....	While handling baggage.	Knee sprained...	
Ste. Flavie.....	C. E. Morton.....	do.....	Fell into gondola car....	Knee injured....	
do.....	J. Fenton.....	do.....	While coupling.....	Leg injured.....	
St. John.....	J. Cosman.....	do.....	While loading freight...	Back strained...	
Painsec.....	C. Saunders.....	do.....	Struck by tender of engine	Considerably injured.	
Pictou.....	N. Gratto.....	Neither.....	While coupling.....	Hand injured....	
Cobbetts.....	R. Hodgins.....	Employé.....	do.....	Fingers crushed.	
Elgin Road.....	Etienne Caron...	Neither.....	Found side of track dead.		do
New Castle.....	A. M. Keiver.....	Employé.....	Grindstone fell on foot...	Ankle dislocated	
North River...	G. Cochrane.....	Neither.....	Attempting to drive across track.	Fatal.....	do
New Castle.....	J. Drummond...	Employé.....	Plow jumped the track...	Ribs broken.....	
do.....	Wm. Galley.....	do.....	do.....	Legs injured....	
Brookfield.....	J. J. McGrath...	do.....	While coupling.....	Thumb crushed...	
Levis.....	J. Kilimberg...	Neither.....	Struck by engine (G.T.R.)	Head injured....	
Moncton.....	W. Welling.....	Employé.....	Struck by engine.....	Seriously injured	
West River.....	John Campbell...	Neither.....	Attempting to get on train in motion.	do.....	
Atkinson Stn...	Henry Hynes...	Employé.....	While applying brake...	Fingers crushed.	
do.....	H. Whitney.....	do.....	No. 33 and Michaud's Special Trains collided.	Fatal.....	do
Rimouski.....	H. Michaud.....	do.....	do.....	do.....	do
do.....	F. J. Levesque...	do.....	do.....	do.....	do
do.....	John Fahey.....	do.....	do.....	do.....	do
do.....	A. Levesque.....	do.....	do.....	Seriously injured	
do.....	A. Jollivette...	do.....	do.....	do.....	
Atkinson Ldg...	Ben. Wood.....	do.....	While coupling.....	Fingers crushed.	
Moncton.....	Charles Clarke...	do.....	do.....	Arm injured.....	
Maccan.....	Jas. Guard.....	do.....	do.....	Fingers crushed.	
Truro.....	— Joary (boy)...	Neither.....	Caught between car and building.	Back and hip injured.	
Richmond.....	Charles Rhinee..	Employé.....	Caught between car and switch.	Feet bruised...	
Moncton.....	J. White.....	do.....	Slipped while sealing cars	Breast injured...	
Richmond.....	D. McTernan...	do.....	Fell on track.....	Knee.....	do
Moncton.....	W. Gardner.....	do.....	Fell from baggage car....	Leg.....	do
St. John.....	D. McCarthy.....	do.....	While unloading freight.	Hand.....	do
Moncton.....	B. C. Gesner...	do.....	Collided with No. 5 train	Seriously.....	

INTERCOLONIAL

RETURN of Accidents and Casualties which have occurred in Canada

Date.	Time of Day.	Number of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.
1889.						
April 17..	21.50	34	Express	P. Corbett.....	J. J. Smith.....	
do 18..	6.00					102
do 24..	5.50	Special.	Freight	H. D. Archibald.....	P. Peterson	
do 23..						
do 26..	16.00					40
do 28..	19.00				S. Wilson.....	
do 30..	18.00				John Gallon.....	181
May 2..	9.05				Jas Fahey	131
do 14..		9	Express			
do 14..	14.12					
do 20..	14.30	Special.	Working	A. Belanger	J. S. Smith.....	37
do 25..		10	Express	J. Michaud		
do 30..	15.00		Shunting		M. Normand	96
do 31..						
June 4..						
do 7..	10.30		Shunting		H. Cowes.....	191
do 12..	11.57	2	Express		W. J. Hunter.....	61
do 18..	16.00		Shunting		R. James	190
do 20..	13.35		Light engine.....		H. McAuley	153
do 26..	15.00	Special.	Freight	Jno. Thompson	N. McLean	92
do 28..	15.30		Shunting		J. Cole	18

RAILWAY.
on the Line of the Intercolonial Railway, &c.—*Concluded.*

Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.	
Belledune	J. J. Smith.....	Employé...	Gauge glass burst.	Hand scalded.	Accidental.	
Richmond	D. Dwyer	Neither	Found in 2nd class car in injured condition.			
Londonderry ...	H. H. Ross....	Employé ...	Run over while shunting	Fatal		
St. John	M. Morrison....	do	While unloading anchor.	Leg cut.....		
Moncton	Jas. Cochran ..	do	While moving safe	Thumb injured..		
Newcastle	M. C. Lockhart.	do	While fixing headlight ..	Side do	do	
Belmont.....	J. W. Grund....	do	Slipped and fell.....	Knee and back injured.		
Ste. Flavie	John Rioux....	do	While uncoupling.....	Fingers crushed.		
Belmont.....	Miss Lauder....	Passenger ..	Struck by engine while crossing track.	Considerably in- jured.		
Athol	J. W. Gallagher	Employé ...	Slipped and fell.....	Foot injured. ...		
Sayabec	Jean Michaud ..	do	While coupling	Hand do	do	
Hampton.....	E. Grier (child).	Passenger ..	Died on train from natural causes.			
Chaudière	Louis Lemieux ..	Employé ...	Fell off engine	Head do		
Moncton	Geo. Mills	do	While turning switch ...	Hand do		
Brookfield	V. S. Donkin ..	do	While handling freight..	Arm do		
St. John.....	Jno. Henderson.	do	While coupling	Hand crushed...	do	
Frosty Hollow {	Miss Lee	Passenger }	Train ran off track	Slightly injured.		
	— LeBlanc	do				
St. John.....	Alex. Ward.....	Employé ...	While coupling	Finger do		
Near Truro	Geo. Nelson	Neither	Struck by engine.....	Fatal		
Amherst.....	Miss Cahill.....	do	do	Seriously injured	do	
Moncton	A. Lutes	Employé ...	Struck by flat car	Side do		

APPENDIX No. 6a.

EASTERN EXTENSION RAILWAY.

OFFICE OF THE CHIEF SUPERINTENDENT,

MONCTON, N.B., 26th September, 1889.

SIR.—I have the honor to submit the following report on the working of the Eastern Extension Railway for the fiscal year which ended on the 30th June, 1889.

I enclose the report of the Chief Engineer on the permanent way and works, the report of the Mechanical Superintendent on the rolling stock, and the following statements prepared by the Chief Accountant and Treasurer:—

No. 1. Capital account.	
2. Revenue account.	
3. Locomotive power	(Abstract No. 1.)
4. Car expenses	(do)
5. Maintenance of way and works	(do)
6. Station expenses	(do)
7. General charges	(do)
8. General balance.	

The length of railway operated was the same as last year—80 miles.

The cost of the road and equipment on the 30th June,

1888, was..... \$1,284,495 76

There was expended during the year..... 34,235 73

Making the total cost to the 30th June, 1889... \$1,318,731 49

The expenditure on capital account was for an extension of the wharf at Mulgrave, and for equipping the road with tanks and water works at various stations, to supply water to the locomotives.

The working expenses for the year were..... \$90,719 04

The gross earnings were..... 72,436 65

\$18,282 39

The gross earnings are a little more than last year, as follows:—

In 1888-89..... \$72,436 65

In 1887-88..... 70,552 20

\$ 1,884 45

The working expenses are about the same as last year, as follows:—

In 1887-88..... \$90,954 73

In 1888-89..... 90,719 04

\$ 235 69

The whole of the permanent way and works were maintained in good repair, and various improvements were made.

The rolling stock is also in good condition.

I have the honor to be, Sir,

Your obedient servant,

D. POTTINGER,

Chief Superintendent.

COLLINGWOOD SCHREIBER, Esq.,

Chief Engineer and General Manager Government Railways, Ottawa.

[1889]

No. 1.—EASTERN EXTENSION RAILWAY.

DR. CAPITAL ACCOUNT, Year ending 30th June, 1889. CR.

1888.		\$ cts.	1888.		\$ cts.
June 30. . . 1889.	To cost of road and equipment.	1,284,495 76	June 30. . . 1889.	By Dominion of Canada.	1,284,495 76
June 30. . .	Water supply . . . \$21,482 16		June 30. . .	do do	34,235 73
	Works at Mulgrave. 12,753 57				
		34,235 73			
		1,318,731 49			1,318,731 49

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 2.—EASTERN EXTENSION RAILWAY.

DR. REVENUE ACCOUNT, Year ending 30th June, 1889. CR.

Year ending 30th June, 1888.	Expenditure.	Year ending 30th June, 1889.	Year ending 30th June, 1888.	Earnings.	Year ending 30th June, 1889.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
17,356 01	Locomotive power, Abstract No. 1	20,176 01	38,406 42	Passenger traffic . .	39,075 77
11,726 68	Car expenses do 2	12,131 63	24,035 81	Freight traffic . . .	26,733 43
43,845 04	Maintenance of way works, Abstract No. 3.	38,281 32	8,109 97	Mails and sundries	6,627 45
7,474 28	Station expenses, Abstract No. 4	7,825 46	70,552 20		72,436 65
10,552 72	General charges do 5	12,304 62	20,402 53	Balance.	18,282 39
90,954 73		90,719 04	90,954 73		90,719 04

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 3.—EASTERN EXTENSION RAILWAY.

LOCOMOTIVE POWER—(Abstract No. 1).

Year ending 30th June, 1888.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
75 15	Mechanical Superintendent's salary, clerks, office and travelling expenses...	207 86
3,413 29	Wages, drivers, firemen and cleaners	3,767 20
7,062 81	Fuel	7,644 80
788 11	Oil, tallow, waste and small stores.	963 69
4,556 68	Repairs to engines, tenders and engine tools.	5,970 84
701 92	Water, including pump and tank repairs.	608 52
758 05	Miscellaneous	1,013 10
17,356 01		20,176 01

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 4.—EASTERN EXTENSION RAILWAY.

CAR EXPENSES—(Abstract No. 2).

Year ending 30th June, 1888.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
3,004 70	Repairs to passenger cars	2,465 00
1,613 31	do postal, express and baggage cars.....	1,368 94
1,419 28	do freight cars and vans	2,488 73
4,954 97	Wages of conductors, train baggage masters and brakemen	5,300 46
308 09	Oil and waste for packing	369 45
367 60	Small stores and fuel	67 40
58 73	Miscellaneous	71 65
11,726 68		12,131 63

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 5.—EASTERN EXTENSION RAILWAY.

MAINTENANCE OF WAY AND WORKS—(Abstract No. 3).

Year ending 30th June, 1888.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
23,194 03	Wages repairing roadway, fences, semaphores.	24,891 80
893 40	Rails and fastenings.	442 75
7,124 30	Ties.	1,124 83
9,369 66	Timber, lumber, &c., for repairs to bridges, fences, &c.	9,801 76
85 55	Repairs to wharves.	23 32
1,346 96	do buildings and platforms.	1,284 06
365 88	do snow ploughs, flangers and tools.	320 49
1,426 24	Clearing ice and snow.	226 80
39 02	Miscellaneous.	165 51
43,845 04		38,281 32

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N. B., 30th June, 1889.

No. 6.—EASTERN EXTENSION RAILWAY.

STATION EXPENSES—(Abstract No. 4).

Year ending 30th June, 1888.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
5,928 91	Salaries and wages of Station Masters, Agents, Clerks, Telegraph Operators, Baggage Masters, Yard Masters, Switchman, Watchmen and Laborers.	5,851 70
1,545 37	Fuel, oil, light, stationery, tickets and other incidental expenses.	1,973 76
	Miscellaneous.	
7,474 28		7,825 46

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N. B., 30th June, 1889.

No. 7.—EASTERN EXTENSION RAILWAY.

GENERAL CHARGES—(Abstract No. 5).

Year ending 30th June, 1888.		Year ending 30th June, 1889.
\$ cts.		\$ cts.
500 04	Superintendent, Train Despatchers, Clerks, office and travelling expenses...	
116 10	Accounting Department, salary of the Accountant and Auditor, Clerks, office and travelling expenses.	500 04
409 24	Advertising.	41 67
9,491 73	Damages to men, animals and goods.	505 93
3 30	Ferry.	11,133 93
32 31	Telegraph expenses (not including pay to Operators).	4 00
	Miscellaneous.	119 05
10,552 72		12,304 62

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

No. 8.—EASTERN EXTENSION RAILWAY.

DR. GENERAL BALANCE, Year ending 30th June, 1888.

CR.

	\$ cts.		\$ cts.
Stores.	6,599 73	Dominion of Canada.	12,822 64
Stations.	5,050 81	Maine Central Railway.	301 09
Cash.	321 09	International SS. Company.	698 47
Rents.	27 00	Boston and Maine Railway.	47 86
Fines and rewards.	3 30	P. E. I. Steam Navigation Company.	3 50
Canada Atlantic Railway.	2 85	Canada Atlantic SS. Company.	135 00
Cooke & Son.	29 52	Bras d'Or SS. Company.	52 50
Grand Trunk Railway.	62 01	P. E. I. Railway.	5 45
Morrison & Co.	7 70		
Intercolonial Express Company.	45 50		
Western Union Telegraph Company.	353 93		
Short Line Railway.	7 15		
Yarmouth SS. Company.	3 60		
Departmental accounts—			
Militia Department.	103 92		
P. O. Department.	1,448 40		
	1,552 32		
	14,066 51		14,066 51

THOMAS WILLIAMS,

Chief Accountant and Treasurer.

MONCTON, N.B., 30th June, 1889.

EASTERN EXTENSION RAILWAY.

Return of Accidents and Casualties which have occurred in Canada on the Line of the Eastern Extension Railway, during the Year ending 30th June, 1889.

Date.	Time of Day.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	Name of Person Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1888.												
Aug. 16	6.55	56	Freight.	F. Ross.	A. Dunbar.	166	Ponquet Bridge.	Arthur Gray.	Employé.	Fell off car.	Fatal.	Accidental.
Sept. 4	14.45	55	do	do	do	172	do	O. Christie.	do	do	do	do
Oct. 16	14.00	55	do	J. McDowell.	G. Feetham.	171	Antigonish.	Jno. Cummings. W. H. Pushie.	do	While coupling.	Knee injured.	

Moncton, N. B., August, 27th 1889.

[1889]

INTERCOLONIAL RAILWAY.

CHIEF ENGINEER'S OFFICE,

MONCTON, N.B., 3rd September, 1889.

SIR,—I have the honor to submit the following report of the maintenance of the Eastern Extension Railway for the year ending 30th June, 1889.

TRACK.

The mileage remains the same as last year.

TIES.

During the year 7,164 ties were renewed, as against 55,703 the previous year.

FENCING.

During the year 9,870 rods of new barb and woven-wire fencing were erected, in place of the old pole and rail fence.

Necessary repairs were made to the snow fences at West Merigomish, Tracadie and Harbor Bouche.

WHARVES AND TRESTLES.

At Mulgrave a portion of the old wharf was re-covered. An addition was made to this wharf, 227 feet long by 24 feet wide.

An approach of crib-work was also built at the south end, 350 feet long and 13 feet wide. This work was done by contract.

BUILDINGS AND PLATFORMS.

At Woodburn the platform was renewed.

At West Merigomish necessary repairs were made to the station, and 42 feet of the platform was renewed. A coal house was provided for the use of the station.

At Merigomish a coal house was provided for the station.

At Piedmont the station was overhauled and painted, and a coal house provided for the station. The platform was renewed.

At Avondale the station was repaired and a coal house provided.

At Dewar's Mills the platform was renewed.

At Barney River the station was repaired and coal house provided.

At Marshy Hope the station was repaired, a coal house provided and the platform renewed.

At Antigonish the station was repaired, and 160 feet of the platform renewed. A bonded warehouse was provided in the freight shed.

At South River the roof of station was re-shingled and necessary repairs made to the station.

At Pomquet, the platform was renewed.

At Harbor Bouche, the station roof was re shingled.

At Mulgrave 100 feet of the old platform was renewed and a new door put in the station, and necessary repairs made.

BRIDGES AND CULVERTS.

The pile trestle bridge at Pine Tree was partially renewed, 21 new bents of 15 feet span were put in, and 150 feet of the top was entirely renewed.

Sutherland's River Howe Truss—new stringers were put on, also 49 floor beams and 95 cross ties.

French River Howe Truss—35 new braces, 10 floor beams and new stringers were put on.

Dewar's Mill bridge was entirely renewed.

James River Howe Truss was overhauled and painted.

Murphy's Mill bridge, Howe Truss—(160 feet span), had 35 floor beams and 2 braces renewed. The chords and rods were painted.

West River pile bridge at Antigonish was entirely renewed.

The Howe Truss at West River had 24 floor beams renewed.

McDonald's Cove pile bridge (155 feet long), was provided with new stringers and corbels, 12 new bents and 138 cross-ties.

McKinnon's Cove pile bridge (60 feet long) received new stringers and corbels. Five bents were renewed and 53 cross-ties.

Pomquet little pile bridge received 6 new stringers and corbels, 6 new bents and 53 ties.

Pomquet large pile bridge (447 feet long), received new stringers, corbels and braces. Twenty-seven bents and 396 ties were also renewed on this bridge.

At Pomquet Howe Truss bridge the stringers were renewed and the track straightened and levelled on bridge.

Black River Howe Truss bridge received new stringers, and corbels and rods were painted.

Chapel pile bridge (75 feet long) received new stringers and corbels. Six bents and 52 cross-ties were also renewed.

Gerrior's Cove pile bridge (60 feet long) received stringers, corbels and braces; also 6 new bents and 52 ties.

Eighty-two pairs of stringers, and cattle guards, and beam culverts, were renewed.

At 16 mile post a cedar box culvert, 3 by 3 and 50 feet long, was put in.

GENERAL.

Seventy-five farm gates were renewed.

Fifteen public and 30 private crossings were re-planked.

Five thousand feet B. M. 4-inch deals were used in repairing the roadway under Pirate Harbor bridge.

Cedar crib-work, 102 feet long, was built near Antigonish, to protect the embankment from freshets of the adjoining stream.

At Antigonish the cattle pens were renewed.

At Bear Brook a siding 210 feet long was put in, for the accommodation of a mill.

At Mulgrave 1,500 feet of additional siding was provided.

At Mulgrave 4,393 yards of filling was put in between the newly erected crib-work and old wharf. About as much more requires to be done before the ground can be properly utilized.

At Piedmont, Antigonish, Bayfield and Mulgrave 50,000-gallon water tanks were erected, at a cost of \$21,400.00. The Haggas system, which had previously been in use on this line, was discontinued after the erection of the tanks.

A large amount of clearing and burning was done on the right of way.

The track has been well maintained and is in good order.

I have the honor to be, Sir,

Your obedient servant,

P. S. ARCHIBALD,

Chief Engineer.

D. POTTINGER, Esq.,

Chief Superintendent Intercolonial Railway,

Moncton, N.B.

INTERCOLONIAL RAILWAY OF CANADA.

OFFICE OF THE MECHANICAL SUPERINTENDENT,
MONCTON, N.B., 12th September, 1889.

DEAR SIR,—I beg to submit the following statements concerning the rolling stock on the Eastern Extension Railway.

It consists of:—

- 9 engines,
- 6 first-class passenger cars,
- 4 second-class passenger cars,
- 4 postal, baggage and express cars,
- 2 conductors' vans,
- 25 box cars,
- 5 cattle cars,
- 70 platform cars,
- 150 5 ton hopper coal cars.

The rolling stock generally is in good condition.

Four new 50,000-gallon tanks have been erected on the line of the Eastern Extension Railway, one at each of the following places:—

Piedmont.	Bayfield,
Antigonish,	Mulgrave.

I have the honor to be, Sir,

Your obedient servant,

H. A. WHITNEY,

Mechanical Superintendent.

D. POTTINGER, Esq.,

Chief Superintendent Intercolonial Railway,

Moncton, N.B.

APPENDIX No. 6b.

WINDSOR BRANCH RAILWAY.

OFFICE OF THE CHIEF SUPERINTENDENT,
MONCTON, N.B., 26th September, 1889.

SIR,—I have the honor to submit the following statements showing the results of the working of the Windsor Branch Railway for the year which ended 30th June, 1889:—

1. Revenue Account.
2. Maintenance of way and works.
3. General balance.
4. Statement of earnings.

I also send you the report of the Chief Engineer on the condition of the permanent way and works.

This line, thirty-two miles in length, was operated during the year by the Windsor and Annapolis Railway Company on the same terms as last year, the company being allowed to retain two-thirds of the gross earnings—the balance, one-third, being paid over to the Government, the latter maintaining the line.

There was a considerable increase in the earnings accruing to the Government, when compared with the last year, as follows:—

In 1888-89.....	\$28,372 11
In 1887-88.....	24,553 55
	\$ 3,818 56

The expenses of maintenance were less than last year, as follows:—

In 1887-88.....	\$24,040 33
In 1888-89.....	20,856 50
	\$ 3,183 83

The earnings and expenditure compare as follows:—

The earnings were.....	\$28,372 11
The expenditure was.....	20,856 50
	\$ 7,515 61

The necessary repairs and renewals of the track, fences, buildings and other structures were made, and the permanent way and works are in good order.

I have the honor to be, Sir,

Your obedient servant,

D. POTTINGER,

Chief Superintendent.

COLINGWOOD SCHREIBER, Esq.,

Chief Engineer and General Manager

Government Railways, Ottawa.

[1889]

No. 1.—WINDSOR BRANCH RAILWAY.

REVENUE ACCOUNT, Year ending 30th June, 1889.

Cr.

Dr.

Previous Year.	Expenditure.	Year ending 30th June, 1889.	Previous Year.	Receipts and Earnings.	Amount, Year ending 30th June, 1889.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
24,040 33	Maintenance of way and works, Abstract No. 1....	20,856 50	8,576 04 14,821 99 1,155 52	Passenger traffic..... Freight traffic..... Mails.....	9,578 81 17,645 14 1,148 16
513 22	Balance	7,515 61			28,372 11
24,553 55		28,372 11	24,553 55		

R. B. BOGGS,
Acct., W. B. Ry.

MONCTON, N. B., 30th June, 1889.

No. 2.—WINDSOR BRANCH RAILWAY.

Abstract No. 1—MAINTENANCE of Way and Works.

Previous Year.	Particulars.	Amount.
\$ cts.		\$ cts.
8,162 71	Repairs to track.....	11,063 68
127 86	Rails and fastenings.....	1,542 35
3,182 00	Ties.....	2,620 94
816 82	Bridges.....	327 38
36 34	Signals.....	106 07
2,311 11	Culverts and cattle guards.....	140 20
32 25	Wharf at Windsor.....	
1,044 27	Buildings and platforms.....	438 49
23 70	Switch locks.....	15 90
4,797 83	Fencing.....	2,802 32
112 67	Hand cars and trollies.....	46 81
358 57	Tools and repairs.....	234 03
1,856 98	Snow ploughs and flangers.....	58 15
1,137 22	Accountant's office and expenses.....	1,121 69
40 00	Miscellaneous.....	338 49
24,040 33		20,856 50

R. B. BOGGS,

Acct., W. B. Ry.

MONCTON, N.B., 30th June, 1889.

No.3—WINDSOR BRANCH RAILWAY.

DR.	GENERAL BALANCE.		CR.
1889.	\$ cts.	1889.	\$ cts.
June 30... Windsor and Annapolis Railway.	2,563 10	June 30.. Intercolonial Railway.....	2,003 37
Stores account.....	6,205 00	Dominion account.....	6,764 73
	8,768 10	/	8,768 10

R. B. BOGGS,

Acct., W. B. Ry.

MONCTON, N.B., 30th June, 1889.

No. 4.—WINDSOR BRANCH RAILWAY.

MONTHLY STATEMENT of Receipts—One third-Earnings.

Month.	Passengers.	Freight.	Mails.	Totals.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1888—July	993 23	1,066 30	95 68	2,155 21
August	1,238 43	1,071 41	95 68	2,405 52
September	1,283 47	1,647 44	95 68	3,026 59
October	775 55	2,315 36	96 91	3,187 82
November	681 96	2,035 88	96 91	2,814 75
December	748 44	1,628 13	96 90	2,473 47
1889—January	560 14	1,349 95	94 46	2,004 55
February	458 48	1,202 40	94 45	1,755 33
March	583 13	1,425 86	94 45	2,103 44
April	673 35	1,380 68	95 68	2,149 71
May	711 20	1,422 64	95 68	2,229 52
June	871 43	1,099 09	95 68	2,066 20
	9,578 81	17,645 14	1,148 16	28,372 11

R. B. BOGGS,
Acct., W. B. Ry.

MONCTON, N. B., 30th June, 1889.

INTERCOLONIAL RAILWAY.

CHIEF ENGINEER'S OFFICE,

MONCTON, N.B., 10th September, 1889.

SIR,—I have the honor to submit the following report of the maintenance of the Windsor Branch for the year ending 30th June, 1889.

The length of the branch is 32 miles.

TIES.

Eleven thousand ties have been renewed during the past year.

FENCING.

Two thousand four hundred and nineteen rods of woven wire and barbed-wire fencing have been erected, in place of the old decayed pole fencing.

TURNABLES.

The old turntable at Windsor was taken out and replaced with a cast-iron table.

BUILDINGS AND PLATFORMS.

The car shed at Windsor was repaired and shingled.

A new platform was erected at Hayes' siding near Mount Uniacke.

BRIDGES.

Eight pairs of iron rail girders were put in between Ellershouse and Windsor.

A standard top was put on the Sackville bridge, the abutments were overhauled and pointed.

A culvert at Stillwater was partially rebuilt.

GENERAL.

The track scale at Windsor was taken up, sent to Montreal for repairs, returned and put in on a new foundation.

A train and gang of men were engaged five weeks in cleaning cuttings and ballasting.

The track is in very good order.

I have the honor to be, Sir,

Your obedient servant,

P. S. ARCHIBALD,

Chief Engineer.

D. POTTINGER, Esq.,

Chief Superintendent Intercolonial Railway,

Moncton, N. B.

APPENDIX No. 6c.

PRINCE EDWARD ISLAND RAILWAY.

SUPERINTENDENT'S OFFICE,
CHARLOTTETOWN, P.E.I., 10th September, 1889.

SIR,—I have the honor to submit the following report on the working of the Prince Edward Island Railway for the fiscal year ended 30th June, 1889.

I enclose the following statements prepared by the Accountant and Auditor:—

- No. 1. Capital account.
 2. Revenue account.
 3. Locomotive power (Abstract No. 1.)
 4. Car expenses (do 2.)
 5. Maintenance of way and works (do 3.)
 6. Station expenses (do 4.)
 7. General charges (do 5.)
 8. Statement of general stores account.
 9. General balance.
 10. Comparative statement of averages.

CAPITAL ACCOUNT.

The total expenditure on capital account to 30th June, 1888, was.....	\$3,741,780 89
No additions being made during the year, the total expenditure to 30th June, 1889, was the same as the previous year.....	\$3,741,780 89

REVENUE ACCOUNT.

The gross earnings for the year amounted to.....	\$171,369 56
Previous year.....	158,363 62
Increase.....	\$ 13,005 94

The earnings per mile of railway compare with the previous year as follows:—

1887-88.....	\$754 11
1888-89.....	816 04

An increase per mile of..... \$ 61 93

The length of road operated in each year was the same, namely, 210 miles.

STATEMENT.

	Passengers Carried.	Earnings.
1887-88.....	131,246	\$66,943 28
1888-89.....	152,786	74,631 01
Increase.....	21,534	\$ 7,687 73

	Tons of Freight Carried.	Earnings.
1887-88.....	59,603	\$80,399 79
1888-89.....	55,682	79,594 05

Decrease.....	3,921	\$ 805 74
---------------	-------	-----------

Mails and sundries, 1887-88	\$11,020 55
do 1888-89	17,144 50

Increase.....	\$ 6,123 95
---------------	-------------

The engine mileage compared with last year was:—

1887-88.....	306,924
1888-89.....	307,540

Increase.....	616
---------------	-----

The train mileage compared with last year was :

1887-88..	248,410
1888-89.....	248,294

Decrease.....	116
---------------	-----

The car milage compared with last year was :

1887-88.....	1,309,922
1888-89.....	1,369,666

Increase.....	59,744
---------------	--------

EXPENDITURE.

The working expenses, as compared with last year, were as follows:—

RENEWALS.

	Ordinary Rolling Stock.	Rails and Fastenings.	Total.
1887-88.....	\$227,745 33	\$1,897 62	\$229,639 95
1888-89	232,678 43	14,881 01	247,559 44
Increase.....	\$ 4,933 10	\$12,986 39	\$17,919 49

Included in the above ordinary expenditure are the following amounts for new works:—

Iron bridge at Five Houses.....	\$ 2,864 64
do at Freetown.....	1,968 59
do at Carroll's	2,060 96
Addition to North Wiltshire station.....	103 57

Total new works.....	\$ 6,997 76
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Increase over last year in fencing.....	3,485 78
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Total	\$10,483 54
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TRACK.

Seven and one-quarter miles of steel rails were laid from Summerside westward, and four miles between Royalty Junction and York, to replace iron rails.

[1889]

Three thousand steel fish-plates have been used to replace broken iron ones. Five steel rail frogs were put in.

SIDINGS.

Suffolk siding was extended 150 feet, and 140 feet were added to Rollo Bay siding.

SLEEPERS.

During the year 76,882 sleepers have been put in the track. Forty sets of switch sleepers, 20 switch frames, and 22 head blocks with switch frames have been renewed.

BALLASTING.

Ten thousand two hundred and ten cubic yards of ballast were distributed where most needed. One thousand five hundred and fifteen cubic yards of earth were used to widen embankments at bridge ends.

BRIDGES, CATTLE GUARDS, &c.

Pig brook bridge received new sills and extensive repairs.

Harper's bridge received four new sills and other repairs.

Huntley bridge was re-built with pitch pine timber.

Carroll's bridge has been replaced by a 26-feet iron rail girder, with stone abutments.

Northam bridge received four new end stringers.

Wellington bridge has been re-built with pitch pine timber.

Freetown bridge has been replaced by a 20-feet iron rail girder and stone abutments.

Breadalbane bridge received two new bents and general repairs.

Breadalbane Road, Clyde and Hunter River bridges received new stringers and top sleepers.

The bridge at Tracadie Tank had new stringers and top coverings; Mount Stewart bridge received ten new floor beams and other necessary repairs.

Neufrage bridge received a new bent under the centre span, and new truss braces.

Saint Peter's bridge had a new covering and two new truss braces.

Midgell bridge was painted, and had necessary repairs.

Marie bridge was painted and received, nine new floor beams.

Mooney's bridge received extensive repairs.

Five Houses bridge has been replaced by an iron plate girder, with stone abutments.

Seven stone drains were replaced by timber culverts.

Seven timber culverts were re-built.

Fifty-seven cattle guards have been renewed.

BUILDINGS AND PLATFORMS.

At Alberton a new double hand-car house was erected.

A new hand-car house was put up at Port Hill to replace one burned down.

At Summerside the coal shed received extensive repairs. The freight house on the wharf received repairs, and new doors.

A new cattle pen was built at Kensington.

At Barbara Weit the flag station was re-built to replace one burned down.

At Hunter River the coal shed was re-built.

At North Wiltshire the freight house received an addition 17 feet long.

At Charlottetown the roofs of the station, store and machine shop were re-shingled. Five new skylights were put in the carpenter shop. A new tool house was built near Charlottetown to replace the one at St. Peter's Road crossing, which was destroyed by fire on 24th, March 1889.

The engine house at Mount Stewart, which was damaged by storm, had extensive repairs.

A platform and flag station were placed at 48 Road.

A new tool house was erected at Baldwin's.

At Souris the engine house, and the roof of the wharf freight house, were re-shingled.

All other buildings received the necessary repairs and renovation.

WHARVES.

At Alberton the wharf received considerable repairs and a number of new fenders.

Summerside wharf received new stringers, and a top plank covering 150 feet long; 195 tons of hewn hemlock, and 30,000 feet of 3-inch plank were used on this wharf. New fenders were placed opposite the steamer's berth.

At Charlottetown 50 tons of ballast and 25 tons of timber were used in repairing the wharf; 10,000 feet of hemlock plank, and four stringers were used to repair the roadway on the wharf.

Georgetown wharf received 1,000 tons of stone ballast, 10 new fenders, and other repairs; 6,000 feet of plank were used in the repair of the top covering.

Souris wharf had 15 new fenders and other necessary repairs; 8,000 feet of hemlock plank were used in repairing the top covering.

FENCING.

Nineteen miles of old fence were replaced with barb wire, and eleven and one-third miles were replaced with woven wire.

3,827 feet of wire and picket fence were erected.

200 feet of board fence and 900 feet of snow fence, which was blown down, was re-built.

SEMAPHORE SIGNALS, &c.

A new semaphore was put up at Royalty Junction to replace one blown down by storm.

STORES.

The purchases of stores during the year amounted to \$95,057.56.

The value of stores on hand to 30th June, 1888, was:—

General stores.....	\$ 83,688 30
Coal.....	1,349 71
Rails and fastenings.....	31,689 81
Old material serviceable.....	7,932 00
Total.....	<u>\$124,659 82</u>

These stores have, for the most part, been purchased by tender and contracts, which follows out the practice of previous years.

I enclose a return of accidents and casualties which have occurred on the railway during the year.

I am pleased to say that the road-bed, buildings and rolling stock are in good condition.

I have the honor to be, Sir,

Your obedient servant,

J. UNSWORTH,

Superintendent.

COLLINGWOOD SCHREIBER, Esq.,
Chief Engineer and General Manager
Government Railways, Ottawa.

[1889]

No. 1.—PRINCE EDWARD ISLAND RAILWAY.

DR.		CAPITAL ACCOUNT.		CR.	
1888.		\$ cts.	1888.		\$ cts.
June 30	To Cost of Road and Equipment to date.....	3,741,780 89	June 30	By Dominion of Canada...	3,741,780 89
1889.			1889.		
June 30	To Expenditure, Year ended 30th June, 1888.....	3,741,780 89	June 30	do do	3,741,780 89

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

No. 2.—PRINCE EDWARD ISLAND RAILWAY.

REVENUE ACCOUNT for Year ended 30th June, 1889.

Previous Year.	Expenditure.	Year ended 30th June, 1889.	Previous Year.	Receipts.	Year ended 30th June, 1889.
\$ cts.		\$ cts.	\$ cts.		\$ cts.
66,390 76	Locomotive power, per Abstract No. 1	60,357 88	66,943 28	Passenger traffic	74,631 01
32,158 91	Car expenses, per Abstract No. 2	34,576 58	80,399 79	Freight traffic	79,594 05
92,339 10	Maintenance of way and works, per Abstract No. 3	113,248 88	11,020 55	Mails and sundries	17,144 50
26,712 41	Station expenses, per Abstract No. 4	28,043 42	158,363 62	Total Receipts	171,369 56
12,038 77	General charges, per Abstract No. 5	11,332 68	71,276 33	Balance	76,189 88
229,639 95	.... Totals	247,559 44	229,639 95	.... Totals	247,559 44

W. T. HUGGAN,

Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

No. 3.—PRINCE EDWARD ISLAND RAILWAY.

LOCOMOTIVE POWER—(Abstract No. 1).

Previous Year.	Details.	Year ended 30th June, 1889.
\$ cts.		\$ cts.
1,272 37	Mechanical Superintendent's salary, clerks, office and travelling expenses.....	1,252 67
15,690 49	Wages of drivers, firemen and cleaners.....	15,772 39
13,539 59	Fuel.....	16,150 96
2,291 98	Oil, tallow, waste and small stores.....	2,091 33
30,685 43	Repairs to engines, tenders and engine tools.....	22,717 17
783 07	Water, including pump and tank repairs.....	600 68
2,127 83	Miscellaneous.....	1,844 68
66,390 76	Totals.....	60,357 88

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

No. 4.—PRINCE EDWARD ISLAND RAILWAY.

CAR EXPENSES—(Abstract No. 2).

Previous Year.	Details.	Year ended 30th June, 1889.
\$ cts.		\$ cts.
7,776 34	Repairs to passenger cars.....	9,100 96
994 16	do postal and baggage cars.....	1,163 25
6,712 69	do freight cars and vans.....	6,730 47
12,707 53	Wages of conductors, train baggage masters and brakemen.....	13,370 06
515 46	Oil and waste for packing.....	384 13
2,818 53	Small stores and fuel.....	2,897 85
634 20	Miscellaneous.....	929 86
32,158 91	Totals.....	34,576 58

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

No. 5.—PRINCE EDWARD ISLAND RAILWAY.

MAINTENANCE of Way and Works—(Abstract No. 3).

Previous Year.	Details.	Year ended 30th June, 1889.
8 cts.		\$ cts.
411 96	Engineer's salary, clerks, office and travelling expenses.....	398 71
45,235 69	Wages in repairing roadway, fences and semaphores.....	51,714 82
4,957 31	Rails, chairs and spikes.....	14,276 62
16,880 15	Sleepers.....	13,508 66
13,685 83	Timber and lumber for repairs to bridges, cattle guards, fences, &c.....	20,117 31
1,284 53	Repairs to wharves.....	3,912 99
5,075 18	do buildings and platforms.....	6,128 82
2,757 82	do snow ploughs, flangers and tools.....	2,716 80
2,050 63	Clearing ice and snow.....	474 15
92,339 10	Totals.....	113,248 88

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

No. 6.—PRINCE EDWARD ISLAND RAILWAY.

STATION EXPENSES—(Abstract No. 4).

Previous Year.	Details.	Year ended 30th June, 1889.
\$ cts.		\$ cts.
19,546 66	Salaries and wages of station masters, agents, clerks, telegraph operators, station baggage men, yardmasters, switchmen, watchmen and laborers	20,251 45
7,165 75	Fuel, oil, light, stationery, tickets and other incidental expenses	7,791 97
.....	Miscellaneous .....	.....
26,712 41	Totals	28,043 42

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

No. 7.—PRINCE EDWARD ISLAND RAILWAY.

GENERAL CHARGES (Abstract No. 5).

Previous Year.	Details.	Year ended 30th June, 1889.
\$ cts.		\$ cts.
4,783 09	Superintendent's and train despatcher's salaries, clerks, office and travelling expenses	4,442 19
5,237 33	Accountant and auditor's, paymaster's and cashier's salaries, clerks, office and travelling expenses	5,288 11
477 04	Advertising	708 28
211 80	Damages to men, animals and goods	244 76
642 10	Telegraph expenses (not including pay to operators)	217 92
687 41	Miscellaneous	431 42
12,038 77	Totals	11,332 68

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P. E. I., 30th June, 1889.

No. 8.—PRINCE EDWARD ISLAND RAILWAY.

STATEMENT of General Stores Account, Year ended 30th June, 1889.

1888.	Dr.	\$ cts.	\$ cts.
June 30...	To balance brought forward.....		114,743 29
1889.			
June 30...	To purchase during the year including rails.....	95,057 56	
	Charges from other Departments.....	14,511 52	
	Pay-rolls.....	2,590 60	
			112,159 68
1889.	Cr.		226,902 97
June 30...	By issues during the year.....		102,243 15
	Balance... { Ordinary stores..... \$83,688 30 }		
	{ Fuel 1,349 71 }		
	{ Rails and fastenings on hand..... 31,689 81 }		
	{ Old material, serviceable..... 7,932 00 }		124,659 82

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P. E. I., 30th June, 1889.

No. 9.—PRINCE EDWARD ISLAND RAILWAY.

DR.

GENERAL BALANCE.

CR.

	\$	cts.		\$	cts.
General stores.....	124,659	82	Dominion account.....	121,095	25
Cash.....	1,229	68	Accident insurance.....	4,555	76
Stations.....	1,218	14	Through ticket ledger.....	2,609	72
Militia Department.....	153	55			
Anglo-American Telegraph Co.....	46	43			
Judge Weatherbee.....	30	00			
Sidney Gray.....	25	00			
Intercolonial Railway.....	95	28			
Railway Extension, Charlottetown....	802	83			
Total.....	128,260	73	Total.....	128,260	73

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P. E. I., 30th June, 1889.

No. 10.—PRINCE EDWARD ISLAND RAILWAY.

COMPARATIVE STATEMENT of Averages for Year ended 30th June, 1889.

Details.	1889.	1888.
Mileage of railway open	210	210
Engine mileage.....	307,540	306,924
Train do	248,294	248,410
Car do	1,369,666	1,309,922
Receipts per engine mile..... Cents	55·72	51·59
do mile of railway..... Dollars	816·04	754·11
Percentage of passenger earnings to gross receipts.....	43·55	42·27
do freight do do	46·45	50·77
do other do do	10·00	6·96
Expenses per engine mile—		
Drivers, firemen and cleaners' wages.....	5·13	5·11
Fuel.....	5·25	4·42
Oil, tallow, waste and small stores.....	0·66	0·75
Repairs to engines.	7·39	10·00
Water and tank repairs.....	0·19	0·25
Miscellaneous.....	0·60	0·69
Mechanical Superintendent's salary, office and travelling expenses.....	19·22	21·22
	0·41	0·41
Total..... Cents	19·63	21·63
Locomotive power per engine mile.....	19·63	21·63
Car expenses do	11·24	10·48
Maintenance of way and works do	36·83	30·09
Station expenses do	9·12	8·70
General charges do	3·68	3·92
Total per engine mile..... Cents	80·50	74·82
Locomotive power per train mile.....	24·31	26·73
Car expenses do	13·93	12·94
Maintenance of way and works do	45·61	37·17
Station expenses do	11·29	10·75
General charges do	4·56	4·85
Total per train mile..... Cents	99·70	92·44
Railway expenses per mile of railway..... Dollars	1,177·85	1,093·52

W. T. HUGGAN,
Accountant and Auditor.

CHARLOTTETOWN, P.E.I., 30th June, 1889.

PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL SUPERINTENDENT'S OFFICE,
CHARLOTTETOWN, 22nd August, 1889.

SIR,—I beg to submit for your information the following statements, showing the operation of the Mechanical Department of this railway for the fiscal year ending 30th June, 1889:

A.—Monthly statement of the cost of locomotive power.

B.—Statement of the performance and consumption of locomotives.

C.—Monthly statement of car mileage.

D.—Statement showing the number of locomotives, cars, snow ploughs and flangers.

E.—Comparative statement of the expenses of the Mechanical Department for the years 1887-88 and 1888-89.

During the year nine 10-ton platform cars have been re-built to replace an equal number worn out in the service. The cost of these cars, \$3,264.37, has been included in repairs to freight cars.

By reference to Statement "D" it will be seen that the stock of locomotives, cars, snow ploughs and flangers provided on capital account consists of:—

- 21 locomotives,
- 17 first-class passenger cars,
- 15 second-class passenger and baggage cars,
- 3 postal and smoking cars,
- 175 box cars,
- 125 platform cars,
- 3 conductors' vans,
- 1 pay car,
- 8 snow ploughs,
- 7 flangers.

I am pleased to be able to report that the efficiency of the rolling stock has been well maintained during the year, and is in good condition.

I have the honor to be, Sir,

Your obedient servant,

J. UNSWORTH,

Superintendent and Mechanical Superintendent.

COLLINGWOOD SCHREIBER, Esq.,

Chief Engineer and General Manager

Government Railways, Ottawa.

PRINCE EDWARD

MECHANICAL

A.—STATEMENT of the Cost of Locomotive

Months.	Miles run by Engines, Less Ballasting.	Cost of				
		Enginemen's Wages.	Fuel.	Oil, Tallow, Waste, &c.	Repairs.	Water, including Tank and Pump repairs.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1888—July	31,939	1,425 28	1,400 36	198 58	1,381 45	167 55
August	31,542	1,437 87	1,596 00	193 59	1,808 53	13 02
September	28,682	1,477 52	1,518 01	187 35	1,326 17	1 17
October	31,822	1,603 75	1,854 10	219 07	1,934 39	69 17
November	31,218	1,358 95	1,825 20	169 92	1,743 93	60 59
December	19,858	1,133 26	1,478 26	175 65	2,388 65	4 88
1889—January	21,510	1,285 07	1,221 53	162 99	2,160 97	77 29
February	19,321	1,175 85	1,133 75	141 48	2,207 48	53 10
March	20,561	1,235 06	1,158 22	135 34	1,940	15 37
April	18,615	1,056 09	808 09	108 85	1,858	43 73
May	24,033	1,214 79	1,052 92	158 41	1,940	44 90
June	28,439	1,368 90	1,104 52	168 10	2,025	49 91
Totals	307,540	15,772 39	16,150 96	2,019 33	22,71	600 68

ISLAND RAILWAY.

DEPARTMENT.

Power, for the Year ended 30th June, 1889.

		Average per Mile Run.						
Miscellaneous, including ex- penses of Office and Engine House.	Total.	Enginemen.	Fuel.	Oil, Tallow, &c.	Repairs.	Water.	Miscellaneous.	Total.
\$ cts.	\$ cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
212 57	4,785 79	4 47	4 38	0 62	4 32	0 53	0 66	14 98
232 49	5,281 50	4 56	5 06	0 61	5 73	0 04	0 74	16 74
259 03	4,769 25	5 15	5 29	0 65	4 62	0 01	0 90	16 62
244 69	5,925 17	5 04	5 83	0 69	6 08	0 21	0 77	18 62
223 28	5,381 87	4 38	5 84	0 51	5 59	0 19	0 72	17 23
281 22	5,461 92	5 71	7 45	0 88	12 03	0 02	1 41	27 50
300 99	5,208 84	5 97	5 68	0 76	10 05	0 35	1 40	24 21
345 46	5,057 12	6 08	5 87	0 73	11 43	0 28	1 78	26 17
287 59	4,772 14	6 00	5 63	0 66	9 44	0 08	1 39	23 20
237 67	4,113 11	5 67	4 34	0 58	9 99	0 23	1 28	22 09
264 17	4,675 95	5 05	4 38	0 66	8 08	0 19	1 09	19 45
208 19	4,925 22	4 81	3 88	0 59	7 12	0 18	0 73	17 31
3,097 35	60,357 88	5 13	5 25	0 66	7 39	0 19	1 00	19 62

J. UNSWORTH,
Superintendent and Mechanical Superintendent.

PRINCE EDWARD

MECHANICAL

B.—STATEMENT of the Performance and Consumption

Months.	Hours in Steam.	Train Mileage.				Miles run by Engines.			
		Passenger.	Freight and Mixed.	Ballasting.	Piloting.	With Train.	Light.	Shunting.	Total.
1888—July.....	4,111	12,539	13,686	1,849	32	28,106	289	5,473	33,868
August.....	4,093	12,706	13,284	3,222	34	29,246	18	5,520	34,784
September.....	3,995	11,016	13,062	3,659	22	27,759	35	4,557	32,351
October.....	4,442	11,178	14,573	5,316	103	31,170	131	6,037	37,338
November.....	4,059	10,534	14,392	1,187	113	26,226	147	6,100	32,473
December.....	3,181	1,462	14,036	543	395	16,436	156	3,824	20,416
1889—January.....	3,247	2,332	14,289	.....	275	16,896	61	4,553	21,510
February.....	3,128	2,170	12,636	28	490	15,324	100	3,925	19,349
March.....	3,360	2,388	13,774	1,243	151	17,556	.....	4,408	21,964
April.....	3,011	488	13,704	1,637	110	15,939	.....	4,423	20,362
May.....	3,441	4,597	14,347	1,374	44	20,362	35	5,103	25,500
June.....	3,433	10,218	13,114	66	.....	23,398	77	5,040	28,515
Totals.....	43,501	81,628	164,897	20,124	1,769	268,418	1,049	58,963	328,430

ISLAND RAILWAY.

DEPARTMENT.

of Locomotives, for the Year ended 30th June, 1889.

Total Mileage.		* Average of Cars per Mile run with Train.	Average Mileage.		Consumption.				Consumption per 100 Miles run by Engines.			
Cars.	Snow Ploughs.		Miles to one hour in Steam.	Of Cars to one of Engine.	Bushels of Coal	Pints of Oil.	Pounds of Tal-low.	Pounds of Waste.	Bushels of Coal	Pints of Oil.	Pounds of Tal-low.	Pounds of Waste.
145,829		5·19	8·23	4·30	15,142	1,426	1,001	524	44·71	4·21	2·96	1·54
151,724		5·11	8·50	4·36	15,653	1,325	1,073	605	45·00	3·80	3·08	1·74
137,232		4·95	8·10	4·24	14,529	1,213	893	557	44·91	3·75	2·76	1·72
170,385		5·48	8·40	4·56	17,321	1,487	934	726	46·39	3·98	2·50	1·94
154,153		5·80	8·00	4·74	17,996	1,228	763	560	55·41	3·78	2·38	1·72
102,877		6·41	6·41	5·03	12,654	1,047	553	451	61·98	5·12	2·70	2·20
86,393	1,643	5·19	6·62	4·01	10,246	964	488	443	47·69	4·48	2·27	2·05
74,695	919	5·03	6·18	3·86	10,335	894	536	384	53·41	4·62	2·77	1·98
109,111	5,282	6·26	6·54	4·96	11,396	959	621	456	51·88	4·36	2·82	2·07
102,147		6·45	6·76	5·01	9,713	854	492	430	47·70	4·19	2·41	2·11
126,610		6·22	7·41	4·96	11,596	1,079	602	436	45·47	4·23	2·36	1·70
120,218		5·13	8·31	4·21	10,652	1,095	469	519	37·35	3·84	1·64	1·82
1,481,374	7,844	5·55	7·55	4·51	137,233	13,571	8,425	6,091	47·87	4·13	2·56	1·85

*Deduct Piloting in making these averages.

J. UNSWORTH,
Superintendent and Mechanical Superintendent.

PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

C.—MONTHLY STATEMENT of Car Mileage, Year ended 30th June, 1889.

Months.	First-Class.	Second-Class and Baggage.	Postal and Smoking.	Box and Stock.	Platform.	Total.
1888—July	30,968	27,689	15,526	46,504	25,142	145,829
August	27,223	30,258	17,151	41,201	35,878	151,724
September	26,785	24,601	11,540	42,099	32,207	137,232
October	30,148	36,810	8,902	53,524	41,001	170,385
November	24,845	26,548	16,191	73,036	13,533	154,153
December	15,813	19,067	7,739	51,825	8,433	102,877
1889—January	17,424	19,188	9,251	32,694	7,836	86,393
February	14,998	16,323	9,419	22,465	11,490	74,695
March	16,693	16,656	10,972	46,780	18,010	109,111
April	14,630	14,147	10,841	39,852	22,677	102,147
May	18,109	17,635	15,444	56,356	19,066	126,610
June	23,865	27,237	10,780	43,667	14,669	120,218
Totals	261,514	276,159	143,756	550,003	249,942	1,481,374
LESS—Ballasting .....	..	228	17,050	15,300	79,130	111,708
Balance	261,514	275,931	126,706	534,703	170,812	1,369,666

J. UNSWORTH,
Superintendent and Mechanical Superintendent.

PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

D.—STATEMENT showing the Number of Locomotives and the various classes of Cars and Snow Ploughs on hand 30th June, 1889.

Particulars.	Locomotives.	Classification of Cars.								Snow Ploughs.	Flangers.	Total.
		1st Class.	2nd Class and Baggage.	Postal and Smoking.	Box and Stock.	Platform.	Vans.	Pay Car.	Total.			
On hand 30th June, 1888, serviceable ..	21	17	15	3	175	120	3	1	334	8	7	15
do do condemned ..	..	..	..	..	..	5	..	..	5	..	..	..
Total stock, 30th June, 1888	21	17	15	3	175	125	3	1	339	8	7	15
Condemned on hand 1st July, 1888 .....	..	..	..	..	..	5	..	..	5	..	..	..
do during the year .....	..	..	..	..	..	14	..	..	14	..	..	..
Less—Rebuilt .....	..	..	..	..	..	19	..	..	19	..	..	..
ADD—Serviceable and repairing ..	21	17	15	3	175	115	3	1	329	8	7	15
Total on record 30th June, 1889	21	17	15	3	175	125	3	1	339	8	7	15

J. UNSWORTH,
Superintendent and Mechanical Superintendent.
[1889]

PRINCE EDWARD ISLAND RAILWAY.

MECHANICAL DEPARTMENT.

E.—COMPARATIVE STATEMENT of the Expenses of the Mechanical Department,
for the Year ended 30th June, 1889.

	1889.	1888.
The miles run by trains were.....	248,294	248,410
do engines were.....	307,540	306,924
do cars were.....	1,369,666	1,309,922
do snow ploughs were.....	7,844	16,641
	\$ cts.	\$ cts.
The cost of locomotive power was.....	60,357 88	66,390 76
do repairs to cars was.....	16,994 68	15,483 19
do labor, oil, and waste for packing, was.....	384 13	515 46
do repairs to passenger cars was.....	9,100 96	7,776 34
do postal and smoking cars was.....	1,163 25	994 16
do freight cars and vans was.....	6,730 47	6,712 69
The cost of locomotive power per 100 miles run by trains was.....	24 31	26 74
do engines was.....	19 63	21 63
do cars was.....	4 40	5 06
The cost of repairs to cars per 100 miles run by trains was.....	6 82	6 23
do engines was.....	5 52	5 03
do cars was.....	1 20	1 18
The cost of labor, oil and waste, for packing, per 100 miles run by trains was...	0 15	0 20
do engines was.....	0 12	0 17
do cars was.....	0 02	0 04
Repairs to passenger cars per 100 miles run by trains were.....	3 66	3 13
do postal and smoking cars were.....	0 47	0 40
do freight cars and vans were.....	2 71	2 72

J. UNSWORTH,
Superintendent and Mechanical Superintendent.

PRINCE EDWARD ISLAND RAILWAY.

RETURN of Accidents and Casualties which have occurred on the Prince Edward Island Railway, during the Year ending 30th June, 1889.

Date.	Time of Day or Night.	No. of Train.	Description of Train.	Name of Conductor.	Name of Driver.	No. of Engine.	Place of Accident.	Name of Persons Injured.	Whether Passenger or Employé.	Particulars of Accident.	Extent of Injury.	Verdict of Coroner's Jury.
1888.												
Sept. 19.	1.10p.m.	3	Accommodation.	J. Thompson.	J. Yeo.	4	Summerside.	Charles Villiard.	Employé	Fell off train while in motion.	Fatal.	No inquest.
Dec. 19.	5.45p.m.	2	Accommodation.	D. A. Macgowan.	J. Hunter.	7	Summerside.	Theo. Nelson.	Employé	Struck by flanger lever.	Jaw fractured.	
Jan. 15.	5.42p.m.	5	Accommodation.	G. W. Hibbett.	J. Hughes.	6	Georgetown.	Frank Trale.	Employé	Fell from top of box car.	Foot and thigh injured.	
Feb. 20.	4.55p.m.	5	Accommodation.	G. W. Hibbett.	J. Hughes.	6	48 Road.	John Stewart.	Employé	While coupling.	Fingers injured.	

[1889]

APPENDIX No. 7.

REPORT ON THE WELLAND AND ST. LAWRENCE CANALS.

BY J. PAGE, ESQ., CHIEF ENGINEER OF CANALS.

OTTAWA, 27th November, 1889.

SIR,—Having been requested to furnish, for the information of the Department, a report on the present condition, working and repairs of the Welland and St. Lawrence Canals; also the works in progress and other matters connected with them, such as will enable the various questions to be readily understood, I have endeavored to collect and condense such details of the main features of the works as enables me to submit a brief outline of matters in the following order:—

WELLAND CANAL.

When adapting this canal to the enlarged scale of navigation a new line to the eastward of the old one was followed from Port Dalhousie to near the north end of what is called the Deep Cut, a little south of Allanburgh, a distance of about $11\frac{1}{2}$ miles. By this plan the summit or Lake Erie level was taken $2\frac{1}{2}$ miles farther to the north and all of the twenty-five lift locks were placed within a stretch of about $8\frac{1}{2}$ miles. The guard lock is situated about 800 feet above or south of the twenty-fifth lock.

From Allanburgh southward to Port Colborne, a distance of 14.94 miles, the old line was deepened and enlarged. The canal was opened throughout in 1883 for vessels drawing 12 feet of water, and in May, 1887, the whole line was opened to vessels drawing 14 feet of water.

A number of vessels of the draught stated—14 feet—and adapted to the length of the locks, which are 270 feet between the gates and 45 feet wide, carry through the canal a cargo of upwards of 2,000 tons each. Some of these large vessels enter the harbor of Port Colborne drawing 16 feet of water and are there lightened to about 14 feet draught by removing part of the cargo, sending it to Port Dalhousie by rail and, at that place, again putting it in the vessel.

The water of both Lakes Erie and Ontario, especially those of the latter being unusually low this season, there was, during a continuance of certain winds, considerable difficulty and sometimes delay in vessels drawing 16 feet of water getting out of the harbor at Port Dalhousie. This, there is good reason to believe, will be remedied next season, as we are now taking measures to prevent sand drifting through the west pier which has long been and still continues to be the main cause of diminishing the entrance channel to barely half its original and, it may be stated, proper serviceable width. It was considered best to adopt measures certain to remove the cause before proceeding to deepen or clear out the channel; the maintenance of which can only be secured by preventing the sand entering through and between the cribs forming the western side of the harbor.

The short life of timber used in the superstructure of piers can scarcely fail to be noticed by any observant person, and when the time for the renewal becomes necessary the inquiry is generally made as to whether something more durable could not be economically adopted for that purpose. With a view to this object an experiment was made at Port Dalhousie in the latter part of the summer and autumn of 1888, to form a superstructure of concrete, composed of broken stone,

Portland and Thorold cement and sand, properly mixed and laid for about 407 feet in length on the inner end of the east pier at that place. This stands well, except the surface of a small piece near the outer end that was laid late in the fall. The outlay upon it was about twice as much as a wooden superstructure filled with stone, planked on top, and with the usual wale pieces along the side, &c., would have cost.

There is, however, a reasonable prospect, that at the end of twelve or thirteen years, the concrete will be in quite as good a condition as it is at present; while a wooden superstructure, by that time, would require renewal.

A considerable extent of the east pier at that place, and part of the upper timber of the west pier, are in a dilapidated condition.

The former should be re-built either with timber or concrete, as may be determined, and the latter overhauled.

The channel between the piers should be sunk or cleared out to a depth of from 18 inches to 2 feet below the top of the mitre sill of the new lock, for a width of 170 feet; but the deepening should not at any place approach nearer than to within 15 feet of the side piers, the greater part of which were sunk 44 years ago, when the means of preparing the foundations for them were both deficient and less suitable for the purpose than can now be readily obtained.

On the 9th January last a violent westerly storm—wind said to have had a force equal to 68 miles per hour—raised the water at the eastern end of Lake Erie to an unusual height, and the rush of it being unchecked at Port Colborne raised the summit level of the canal to within 26 inches of the top of the coping of the aqueduct, which is about $7\frac{2}{3}$ miles from the lake, and when stopped by the guard gates near Thorold the piling of the water was such as to leave indications that a small quantity had passed in rear of the lock, situated about $16\frac{1}{4}$ miles from Lake Erie.

It is fortunate that the structure on the summit level has been throughout adapted to what is called the *Grand River Level*, that is to say, a height of 8 feet over the ordinary surface level of Lake Erie.

This great rise of water in the canal, together with the action of wind upon it, had the effect of washing out the face of "made banks" over the stone facing intended for their protection. This facing or lining of the banks consists of broken stone, placed so as to be 18 inches below and 5 feet above ordinary low-water line of Lake Erie. This, as previously stated, was considered sufficiently high to meet the temporary swell or surge raised by steam vessels in motion when the canal is at the usual level of the lake. In order to be able to prevent sudden rises of the lake, affecting the summit level of the canal, the entrance lock is provided with gates facing towards the south. These, it was considered, might reasonably be allowed to remain open when Lake Erie is low or at ordinary height in moderate weather during the season of navigation; but they should be closed and the entrance lock used as a lift-lock at periods of high water, and at all times they should be shut on the approach of a storm and invariably at the close of navigation each year. It is only the unusual height of the banks of the summit level that would justify or warrant the lock gates being left open at any time or season of the year.

To maintain the supply when the guard gates are closed, a covered raceway, 25 feet in width, and an open raceway, 32 feet wide, were both formed on the west side of the canal, and at the lower end of these there is a regulating weir, in which there are five clear openings, aggregating 80 feet in width. The lower part of each of these five bays forms a movable bulkhead, and over each there are three sluices, making in all fifteen. The lower bulkheads and sluices can be easily and readily operated by the machinery, fitted up for that purpose, in a house over the weir.

From some unfortunate unknown reason the gates of both the old and new locks were open at the time of the storm in January last. The material washed out of the top inner edges of the banks has, of course, been deposited in the channel and must at some time be removed, the quantity of which, ascertained from cross-sections made the same month, was estimated at upwards of 22,000 cubic yards. With a view of getting at the cost of making up the banks and protecting them in case of a

similar occurrence, one-third of the quantity of material required was estimated as *earth* and two-thirds as *broken stone*. The probable cost of both these items was assumed at \$15,000.

On again considering the matter, it was decided not to put any loose earth on the top edge of the bank or stones in a position that they might easily be dragged into the channel; but to use the amount appropriated for the purpose of making good the damage done in a way that it would be equally effective and at the same time present a fair appearance. This consisted in giving the inner top part of the banks a greater slope and sodding it, as well as the rear or outer sides of all the banks between Lock No. 25, at Thorold and Allanburgh. This has been done, and not only gives the banks a good appearance, but will be found to be a lasting benefit, that will have a tendency to diminish the cost of future maintenance.

The unusually violent storm above mentioned that occurred in January last did great damage to the superstructure of the pier work on the western side of the entrance channel to Port Colborne Harbor, and the top part of three of the detached cribs on the east side were slightly injured. For an extent of about 1,900 feet from the southern end, inward, the covering plank of the west pier was torn off, which, together with the cap and wale pieces for that distance, as well as the side timbers, from one to three courses in depth, were twisted, torn off and carried away by the action of the storm. The stone ballast was washed out at many places from 1 to 2 feet in depth, and at several places from 3 to 4 feet in depth. The stone, however, appears to have been either dropped close alongside of the pier or carried beyond the range of the channel.

The timber and plank required for repairs were supplied under a special contract, and the work was done by men employed by the day, under the immediate direction of Mr. Thomas Secord, a competent local officer, who did it well and economically.

The piers at Port Maitland were also damaged by the storm of the 9th January last, but to a less extent than those at Port Colborne.

Materials for the repairs at Port Maitland were provided by contract, and the work done under the direct superintendence of Mr. John E. Scott, the local officer, who, during the summers of 1888-89 has unwatered, thoroughly overhauled the floor and aprons and re-built part of the three waste weirs on the Haldimand side of the river, opposite Dunnville, besides securing and raising the dam at that place; so that all the works in that vicinity are now in the best possible state of repair. These various and, it may be stated in some cases, very difficult works were intrusted to the direct management of Mr. Scott, who has given full satisfaction and shown himself to be a competent, energetic and reliable officer.

The great and sudden variation of the water level of Lake Erie, caused by winds, is shown in a marked degree by the fact that at the time above mentioned (9th January last) it was at Port Colborne fully 7 feet over the assumed low water line, and that in the latter end of May and beginning of June a continuance of strong easterly winds reduced it to fully one foot below what it was ever known to be before, or 18 inches below the assumed low water line; thus making a variation of $8\frac{1}{2}$ feet between the 9th January and 3rd June.

At the latter time a few vessels were detained several hours.

When the Government, by Order in Council of 20th December, 1886, resumed the direct control of what is called the "Chippewa Cut," the bridge which forms the main road crossing through the village of Chippewa was in so dilapidated a condition that an entire new structure had to be built. This, after an examination had been made and a decision arrived at as to what work should be done, was placed under the control of Mr. Ellis, the Canal Superintendent, who has succeeded in getting a very good bridge constructed: the swing part of which is a light structure of mild steel, and was built by Mr. Weddell, of Trenton. Other parts of the work were done by men employed by the day.

Having thus drawn attention to some of the outlying works and other special matters, it may now be stated that the main or enlarged line of the Welland Canal

was closed for the season of 1888, or the 1st of December, and was again opened for the passage of vessels on the 16th April, 1889. The old route from Allanburgh to Port Dalhousie, *via* the valley of the Twelve-Mile Creek, closed also on the 1st December, and was opened 1st May, 1889. The main line since June, 1888, up to the present time has been kept in a good state of repair, and in successful operation, except for 44 hours in May last, when a propeller named the "Escanaba" carried away the head gates of Lock No. 6, on the 3rd of that month. The owners of the vessel have since paid for the damage done to canal property. Again, on the 29th July the steamer "Haskell" struck the head gates of Lock No. 16, which resulted in displacing, and almost the total destruction of three of the gates of that lock, and great damage to the banks of the canal, and injury to some of the adjoining lands below, by the sudden lowering of the level above, and escape of so large a body of water. This caused a delay of 39 hours, but it is considered proper to state that the owners of the vessel promptly paid the proprietors of the land for the injury they had sustained, and gave a bond for the damages done to canal property, to be settled when the correct amount has been ascertained.

All the lock gates, swing bridges, weirs and other structures on the main line have been kept in an efficient state of repair; the side ditches have been cleared out and deepened where necessary; the banks, where required, raised, strengthened and protected, and everything done that was required to keep the canal in good condition.

The sodding of the banks of the new canal, in 1887, between Port Dalhousie and Thorold has been found of great benefit in the way of protection from the cutting action of rain and melted snow which, on the sloping side banks, whether cut out of the solid or "made," are all but certain to be formed into ruts more or less deep and worn out of shape, unless in some way protected.

It may further be stated that properly selected sods have also the beneficial effect of preventing the growth of thistles on the banks, which are so much objected to by farmers in the vicinity, that a considerable expense had previously to be incurred in cutting them down. As before stated, the banks between Thorold and Allanburgh were sodded last autumn; seeing the good effect of what has been done in that way, I feel warranted in advising that authority be granted to have the banks of the Deep Cut, between Allanburgh and Port Robinson, sodded at the best time for that purpose during the year 1890.

A new swing bridge has been built over the "Feeder" in line of what is called the Forks Road; and the swing part of the bridge over the old canal, at Hurst's Road, about a mile above Thorold, has been re-constructed. It may further be stated that, within the past three years, four of the other swing bridges over the old canal have been entirely re-built, as stated by Mr. Ellis, after the plan sent from this office for the St. Paul street bridge, at St. Catharines, modified to suit the respective plans.

All the main bridges on the old line are now in a serviceable condition and likely to continue so for a number of years.

The raceway connected with the old regulating weirs in use in the town of Thorold, in the vicinity of Albert street, have been well secured; permanent abutments and a suitable bridge constructed in line of the street, and the work throughout done in a strong and substantial manner.

The culverts at Sun Fish Creek, near Dunnville, at Hall's and Broad Creek, have been thoroughly cleared out. The banks on the line of the old canal, between Allanburgh and Port Dalhousie, as well as the old lock gates and weirs on that line, have been kept in as good a state of repair as could be done at a moderate expense.

It is, however, proper to state that many parts of the old works are much decayed, and require a good deal of attention to keep them in anything like a safe working condition for even the comparatively small number of vessels that make use of it for local traffic.

The traffic on the main line during the season of 1889, as near as can be approximated at the present, has been about 33 per cent. greater than it has been for any season during the previous three years.

MURRAY CANAL.

This canal is nearly $5\frac{1}{8}$ miles in length between the pier head at the western and that of the eastern entrance ; each of these piers is about 500 feet long. The canal is 80 feet wide at bottom, and sunk to a uniform depth of 11 feet below the lowest known water level of Lake Ontario ; the side slopes throughout are 2 horizontal to 1 vertical.

There are four swing bridges on the line, each of which, when not in position, leaves two clear openings of 61 feet in width. The bridges are situated as follows :—

One on the line of the Brighton Road ;	
do do Smithfield Road ;	
do do Picton Railway ;	
do do Trenton Road.	

At each of these bridges both sides of the canal have been protected with masonry laid in cement mortar for a distance of 250 feet on the east and west sides of the centre line of the respective structures. At the western entrance from the inner end of the pier eastward, for a distance of 2,500 feet, the banks on both sides of the canal have been protected by a facing of rip-rap stone. At Picton Railway bridge 996 feet of the banks have been similarly faced with stone, and at the eastern entrance both banks have been protected with rip-rap stone for a distance of 4,025 feet.

There are still about $3\frac{1}{8}$ miles of the inner faces of both banks exposed to the action of the swell raised by easterly and westerly winds as well as that caused by vessels using this route, and it may be said that these parts of the banks are being very considerably cut into and damaged ; the material washed out is, of course, deposited in the bottom of the canal.

It is very desirable that authority be granted to have the parts of the banks above mentioned protected with a lining of stone as early as circumstances will admit.

It is also important that a keeper for each of three highway bridges should be named, in order to prevent any unauthorized person interfering with them.

When in that neighborhood, on the 19th October last, I went from the eastern end of the canal to the town of Trent on the line that the people there represent they are desirous of having deepened and improved. The local officer, J. E. Rosamond, accompanied me, and was requested to have soundings taken along the proposed route, as well as on the line of the existing but more circuitous channel, and to have a survey made as soon as the ice takes this winter that will supply all the necessary information to enable a decision to be arrived at.

WILLIAMSBURG CANALS.

All the different divisions of these canals, viz.:—Galops, Iroquois, Rapide Plat and Farran's Point, were closed on the 10th December, 1888, and were again opened for the passage of vessels on the 22nd of April, 1889. All the lock gates, bridges, entrance piers and banks have been kept in good condition during the season, with ordinary repairs, except the upper gates of the lock at Farran's Point, which have not been working well for some time. It is therefore intended to have them taken out and thoroughly overhauled, so as to be ready for next season's operations.

The buoys between Johnstown and Dickenson's Landing were moored in position by the time they were required for the guidance of those in charge of vessels. The buoy-boat has, in a great measure, been rebuilt, and is now in good condition for the service.

A. G. Macdonald, who was for a number of years superintendent of these canals, died on the 27th January, 1889. Since that time Mr. John Reid, of Cardinal, has been in charge of them, and has shown himself to be a careful, attentive and energetic officer.

Within the past few years the upper approach to the Galops Canal has been greatly improved, by the formation of a deep-water channel more to the north and in a course leading direct to and from the entrance.

The upper part of this canal is under contract to be widened and deepened to 14 feet at the lowest stage of the river, embracing the construction of a lock in a position that will admit of vessels passing either up from or down to the smooth deep water below the rapids. The dams necessary to enable this object to be effected are well advanced, and other parts of the works are in progress.

It may here be stated that the contract provides for the water to be shut out of this canal for one winter, for the purpose of enabling the present guard lock to be removed and a supply weir constructed. This will of course necessitate the shutting down for a time of the mills at Cardinal and Iroquois, as well as other business, or establishments, at these places that depend on water power from the canal.

GALOPS RAPIDS.

The channel undertaken some years ago to be formed through these rapids has been completed. It is now 200 feet in width, straight, and from 16½ to 17 feet in depth; but pilots, as usual, prefer putting up with all the disadvantages of the old, crooked, shallow line rather than use a new one, with which they are unfamiliar. It is no uncommon occurrence for even this important and useful class of men to be a little prejudiced in favor of the route they have been accustomed to follow. It is, however, quite likely that the new line will, ere long, be found the most advantageous; at all events, this is certain to be the case when a larger, deeper-laden class of vessels are brought into use.

RAPIDE DU PLAT CANAL.

A new and enlarged lock has been built at the upper end of this canal and the old guard lock converted into a supply weir; both are completed and in use, but there still remains some work to be done by and at the contractor's expense before a settlement can be made. This consists in the removal of a shoal, at the upper outer side of the entrance, formed there either with the concurrence or want of attention on the part of the contractor.

The survey and examination for the enlargement and deepening of this canal, as well as those for the construction of the lift lock and weir at the lower entrance, are well advanced, so that tenders for the works can, within a short time, be invited. It may, however, be now stated that the north bank of it is, generally, very high, and the one on the south side, for the most part, close to the rapids and so formed that it cannot be safely interfered with in any way; consequently, long hauls and double handling of the material to be removed in widening and deepening the prism will be rendered indispensable. This of course means a considerable outlay for executing the work.

In this connection it may be stated that the shoal indent or bay east of the mills and opposite the eastern part of the town of Morrisburg could readily be made available for deposit ground for material excavated from the canal, and the place could afterwards be used for mills, wharves or other useful purposes. To admit of doing this the old saw-mill, logs and lumber in that vicinity should be removed. There being no lease nor letter of permission for any such an establishment being there, the owner should be at once notified to vacate the premises.

FARRAN'S POINT CANAL.

Having recently given a good deal of attention to the lines of the channel, the course and direction of the river currents in this vicinity, and after full consideration, the conclusion has been arrived at that the attempt to meet the requirements of the enlarged scale of navigation at this place, by means of a chain-vessel, would be so problematical that I cannot now recommend the experiment, although hitherto favorably impressed with it.

After looking at the matter from every point of view in which it presents itself, I am now fully convinced that although the deepening and enlarging of the prism of the canal and the construction of a new lift lock at that place will be both difficult and expensive, it will be found the most certain way of effecting the contemplated

object of securing a permanent route for the passage of large vessels engaged in the trade.

CORNWALL CANAL.

It is no doubt within the recollection of those directly interested in the navigation of the upper part of the River St. Lawrence that a serious breach occurred on the night of the 11th October, 1888, in the south bank of the Cornwall Canal, between Mille Roches and Moulinette, which prevented the passage of vessels until the morning of the 15th November following. This breach in the bank, although large and of a peculiar nature, was not of that extent that would, under ordinary circumstances, have required for its repairs over one-third of the time that had to be spent upon it. During the greater part of the time that the works were in progress it rained almost incessantly night and day; whilst the moving around of men and horses worked up the material into a soft, sticky sort of puddle, that added greatly to the difficulties which had to be met. Besides, the requisite number of suitable men and teams could not be obtained. Although there was no scarcity of either men or teams ready to put in an appearance, very few of them were accustomed to the kind of work and certainly showed no great desire to learn.

This unfavorable state of matters led to delay and greatly increased the expense.

On carefully examining the river side of this part of the line it was found that the water was fully 19 feet deep up to near the toe of the outer slope, and that the place which formed the seat of the bank had a great declivity outward, rapidly increasing from the toe of the slope downward to the depth above stated. This inclination of the seat of the bank, together with the softening effects, on its south side, by high water in the north branch of the river in January and February, 1888 no doubt led, in a great measure, if not wholly, to the breach that occurred at the time before mentioned.

On looking closely along the outer lower side of the different parts of the banks it appears that the place above referred to is the only one on the line where the same state of matters exists, *i.e.*, at all other places the natural surface of the ground is either level or only slightly inclined from the toe of the slope of the "made" banks outward; consequently, such another disastrous occurrence as that above mentioned is quite unlikely again to take place.

On the evening of Saturday, the 17th November, the lower gates of Lock No. 18 were forced out of place by the pressure of the water when filling the lock; the men in charge having neglected, or from some unknown cause, omitted to have them properly mitred. Arrangements were at once made to put in new gates in place of those that had been damaged, which was fully accomplished and navigation resumed by noon of Monday, the 19th November.

Excepting the casualties at and delays for the respective times above stated, this canal was kept, by means of ordinary repairs, in fair working condition throughout the season of 1888, when it was closed on the 26th December. It was again opened for traffic on the 22nd April, 1889.

It is believed proper to state here that on the 30th June last D. A. McDonald, who had been for many years an energetic and faithful superintendent of the works on this canal, was, at his own request, allowed to retire from the service, on the understanding that he should remain for at least three months to advise and assist his successor, A. P. Ross, who at the date above mentioned entered on the discharge of the duties of superintendent. These for the past few months have been of an unusually onerous nature, caused in a great measure by the low stage of the water in the River St. Lawrence and the importunities of both forwarders and mill-owners, the latter pressing for water to drive their machinery and the former insisting on getting a sufficient depth for vessels drawing fully 9 feet to pass freely, both of which are demands that it is extremely difficult to comply with, not only from the low state of the river, but also from the fact that the bottom of the canal at the eastern or lower end of the summit level is higher than it is at the upper or western end, or the reverse of what should be the case to meet the requirements of even a

moderate supply at the lower end of the line. But there is good reason to believe that the works of deepening and enlargement, now under contract, when completed will fully meet not only all the wants of navigation at that place, but will afford without, inconvenience a surplus for all the water power leased or likely to be required at the lower end of the canal.

The new entrance formed at the lower end of this canal and the two enlarged locks built in connection with it were opened to the trade on the 20th October, 1882, and since that time, during the season of navigation, they have continued in efficient use.

It may here be stated that this part of the enlargement of this canal was first undertaken for the reason that the lower old lock showed indications of what has since taken place—its entire failure—and the line was placed further to the south, so that the difference of level might be overcome by two locks, and admit of leaving a large basin between them, as on the old route.

Previous to undertaking the enlargement at this end of the canal the mill-owners and other interested parties in that vicinity memorialized the Department in January, 1875, to the effect that to raise the water in the Cornwall reach of the canal 2 feet above its present level would be a great benefit to them, and that if it be done that they, the memorialists, will “undertake to make the necessary changes “in their own inside flumes and sluices at their own expense and to relieve the “Government from liability therefor.”

This having been agreed to at the time, all the new works, as well as the bottom and surface levels of the canal and banks, have been arranged to meet the case. It is therefore desirable that mill owners and others should be informed that during the winter in which the canal is emptied for the purpose of proceeding with certain bridge and weir works connected with the enlargement that they (the mill owners) will be expected to carry out their part of the agreement relative to the alterations required to their flumes, sluices, &c.

The works at the upper end of this canal consist of widening and deepening the channel-way; the construction of a lock, adapted to the variation of the river level, and a large regulating weir. They were let in April, 1884, to a firm of contractors named Jocks & DeLorimier, who, through an agent, have been letting and farming out the various parts of the works ever since that time.

It is true that a large part of the material to be removed has been of a hard nature and difficult to excavate. This was, however, known before tenders were invited, and therefore can only be accepted in a limited sense as an excuse for the dilatory manner in which the works have been carried on. Still it affords conclusive evidence of the impropriety of being obliged to accept a low tender from persons who have neither a knowledge of the value of works nor of how to conduct them, and who appear to feel no responsibility—moral or otherwise—relative to carrying out the spirit of the agreement entered into.

When attention was drawn to the slow rate of progress, and the necessity for greater efforts urged, the person present generally remarked that he had nothing to do with the part of the work mentioned; he would, however, sometimes give the name of someone who should attend to it, but almost invariably the person named was absent. Thus the operations continued to drag on for years in a slow and unsatisfactory manner, but during the past season better indications of progress have been displayed than heretofore. The foundation of the lock has been laid throughout, in the manner provided for in the contract, and the walls carried up of a good, sound and substantial class of masonry for a height of from 10 to 14 feet, or for nearly two-thirds of their full height.

The supply weir has still to be built, which must be done during the winter of 1890-91, as it is to be built across what is now used as a navigable channel. There is now good reason to believe that all the works embraced in this contract will be completed and ready for use on the opening of navigation in 1891.

The Legislature, during 1887-8, granted an appropriation towards completing the enlargement of this canal from opposite the town of Cornwall to the lower end of what is known as the Dickenson's Landing section.

On receiving the necessary authority surveys and examinations were at once proceeded with, in order to enable a decision to be arrived at as to what should be done, and the best course to adopt to affect the contemplated object. This, after a careful consideration of the various questions that presented themselves led to dividing the line into seven sections, then making a plan and detailed description in the form of a specification of the various works that have to be done on each of them.

Tenders were then invited by public advertisement from parties desirous of engaging as contractors in the performance of such undertakings.

Seventeen tenders were sent in for the three lowest sections, viz.:—Nos. 2, 3 and 4—all three of which were awarded to Messrs. Wm. Davis & Sons, who entered into contract in November, 1888.

For sections Nos. 5, 6, 7 and 8 there were nine tenders received. All the four sections were awarded to what is termed the "Gilbert Blasting and Dredging Co., Limited," who also entered into contract in November, 1888.

Section No. 2 commences 30 feet east of the wharf opposite Pitt street, in the town of Cornwall, and extends fully $1\frac{3}{4}$ miles to the westward. It embraces lowering the bottom of the canal, at least 3 feet, and raising the banks 2 feet; repairing and increasing the height of the walls of old Lock No. 17; raising the banks of the hydraulic raceway, so as to provide for an additional height of water in the Cornwall level of the canal; the formation of centre piers and abutments for a swing bridge in line of Augusta street, in the town of Cornwall, also retaining wall in that vicinity, the construction of an enlarged lift lock on the south side of the present structure, and all the work necessary to convert the old lock into a regulating weir; the extension of Wood's Creek culvert, and such other work on the section as may be found necessary to carry out the contemplated object.

Section No. 3 is a little over one mile and a-third in length. It embraces the construction of an enlarged lock of 6 feet lift on the south of the one at present in use, and converting the old lock into a regulating weir; the lowering of the bottom of the canal 3 feet and raising the banks 2 feet east of the lock; and on the upper or western part of the section lowering the bottom 5 feet, and such other work as may be required.

Section No. 4 is fully $1\frac{1}{2}$ miles in length. On it an enlarged lock of $7\frac{1}{2}$ feet lift is to be built; the bottom of the canal is to be lowered fully 5 feet east of the lock, and on the western end of the section the bottom is to be made $7\frac{3}{4}$ feet below the top of the mitre sill of the old guard lock; the regulating weir is to be placed in such a position that the old lock will form a raceway from it.

The tunnel or roadway under the canal at Robinson's is to be removed and a drainage culvert built and extended to the outside lines of the banks on both sides of the canal.

All the land between the canal and the river, from the 9-mile road up to Lock No. 20 has been acquired by the Government and either settled for or arrangements made for that purpose. The enlarged lock on each of these three sections being intended to be placed on the south side of the old structures; all the workmen's houses have been taken down and the materials of which they were built removed.

The foundation or floor for the lock on Section No. 2 has been laid in the best manner that could be done. It consists chiefly of a stratum of Portland cement concrete, 24 inches in depth, on which the cross of floor timbers have an uniform bearing throughout; besides, at the mitre sill platform at the lower end bearing piles are driven and every precaution taken to make the whole secure. The walls on both sides have been carried up one course and the north upper wing has been raised several courses in order to support the bank at that place. Wood's Creek culvert has been lengthened, at the outer end of which has been placed a self-acting gate intended to remain open when the drainage water from the north is higher than the surface of the river and closed when the river rises higher than summer water level. The wall between the culvert and lock has been carried up to about 8 feet in height. The wall on the south side of Water street, near the lower end of

the section, has been completed. Old Lock No. 17 has been partly repaired and the walls at the upper end of it have been raised to the height required for a considerable distance below the gates.

On Section No. 3 about half of the excavation for the lock pit has been taken out, the side piling done, and the foundation for the outer side of the bank, at the lower end of the lock, formed, and such other work done as time and circumstances would permit.

The lock pit on Section No. 4 has been excavated to the required depth and piles have been driven to receive the mitre still platforms at both ends of the lock, and such other works done and arrangements made as will facilitate future operations.

It is considered proper to state here that the contractors have on the ground a full supply of the best description of plant and equipment for carrying on the different parts of the works expeditiously. These in part consist of a large number of derricks for handling and laying the stones; pile drivers; dredging machines; a planing machine; a great number of horses and carts; buildings for various purposes; abundance of tools for workmen; besides, every indication is shown that they possess the ability and energy to conduct the various operations advantageously, and manifest, not only a desire to urge them forward, but to do so in a satisfactory and creditable manner.

The greater part of the face or dressed stones for the lock have been prepared and large quantities of them have been delivered in the vicinity of the respective places where they are required.

The unusually wet season and at some places the peculiar nature of the excavation have at times led to considerable difficulty and delay, but no efforts have been spared to meet, energetically, the various cases as they arose.

Section No. 5 is 6,967 feet in length. It embraces the removal of the culvert or tunnel at old Mille Roches; the construction of the piers and abutments for a roadway, swing bridge, and the formation of approaches to it; also the widening and deepening of the canal prism and the protection of the north bank with stone.

Section No. 6 is 6,000 feet in length. It includes the widening and deepening of the canal, raising the banks where required, facing the north bank and elsewhere with stone, etc.

Section No. 7 is 7,500 feet in length. It embraces the widening and deepening of the channel way of the canal, the removal of the culvert or tunnel at Moulinette, the construction of piers and abutments for a roadway swing bridge and the formation of approaches to it; facing north bank, and where required, with stone.

Section No. 8 is 7,317 feet in length. It includes widening and deepening of the water way of the canal, raising certain parts of south and facing the north bank, etc., with stone.

The execution of the works on the four above mentioned sections (No. 5, 6, 7 and 8) was, as before stated, awarded to one firm, who have not succeeded in doing as much of the work as was expected. This is, no doubt, in a great measure due to the death of E. E. Gilbert, the senior member of the firm, on the evening of the 12th February last, who had called the same day at this office and described certain machinery he intended to make and use in doing the work his firm had contracted to perform, and there is little or no doubt that he would have affected the object, as he, as a machinist, would not suffer by comparison with any one engaged in that branch of business.

The works are in progress under the other members of the firm, who represent that they would have been further advanced if certain amounts due them, about the time above mentioned, for work done, had not been unfairly withheld from them.

Under the circumstances, it has not been considered desirable to do more than to urge the contractors to greater exertions, which they, within the past two months, have succeeded in making.

There are now three dredging machines on the works, but not a sufficient number of scows and other equipment to keep them all employed. The contractors

state that by the next season they will be prepared to urge forward the work expeditiously.

It is now considered proper to remark that the greater part of the lands necessary for the enlargement on the north side of the canal have been settled for, or arrangements made for that purpose.

LAKES ST. LOUIS AND ST. FRANCIS.

The surveys and examinations on both sides of the River St. Lawrence, between Lakes St. Louis and St. Francis, previously made, had in view the requirements of a canal of 12 feet draught of water, that being the scale of navigation decided on prior to 1875. But on authority being granted at the last session of the Legislature for forming a line of enlarged canal to overcome the difference of level between these two lakes it was understood that it should be of the character and dimensions of that adopted for the enlarged canals constructed and those in progress between Lake Erie and Montreal.

It was therefore considered necessary to have both sides of the river re-surveyed and re-examined, as the addition of 2 feet more to the depth would not only be likely to affect the question of the entrances to the canal, but also the crossing of streams and drainage courses of any line that could be adopted on either side. These surveys and examinations are now well advanced, although not in such a condition as warrants anything like a reliable opinion being yet submitted or recommendation made on the subject.

I had hopes of being able to get matters sufficiently advanced to enable a decision to be arrived at and land for the right of way acquired or expropriated before it was covered with snow. This, however, could not be accomplished, but no effort will be spared to have the leading questions connected with the subject disposed of at the earliest possible time.

I have the honor to be, Sir,

Your obedient servant,

JOHN PAGE,

Chief Engineer of Canals.

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals,
Ottawa.

APPENDIX No. 8.

DEPARTMENT OF RAILWAYS AND CANALS.
SUPERINTENDING ENGINEER'S OFFICE,
MONTREAL, 21st November, 1889.

SIR,—I have the honor to submit my report on the various works under my charge, for the fiscal year 1888–89, ended 30th June last.

These works are the Lachine and Beauharnois Canals, on the River St. Lawrence, and the Chambly Canal and St. Ours Lock, on the Richelieu River.

These canals have been maintained in an efficient state, without accident or interruption to the traffic. Statements are annexed, showing the amount collected for fines, damages, &c., together with monthly returns of the highest and lowest water registered at the lower and upper entrances of each canal, and on each of the mitre sills of St. Ours Lock.

LACHINE CANAL.

This canal was closed by ice on 2nd of December, 1888. The water was drawn out of the canal on the night of the 5th of April, 1889, and let in again on the night of the 20th of that month, navigation was fully opened at midnight on the 21st.

During the fifteen days the water was out, all the works under water were overhauled and repaired.

During season of navigation the water was kept at a good height in all the levels, both for navigation and manufacturing purposes.

From opening of navigation on 21st April, 1889, until the close of the fiscal year, the trade through this canal was very brisk. Apart from the four weeks detention to the St. Lawrence route trade, caused by a break in the Cornwall Canal bank at Mille Roches, no accident or delay occurred on this canal during the year.

All the mechanical structures and other works in connection with this canal have been kept in the best condition possible.

NEW WORKS.

The landing wharf built on piles, on the south side of the canal, immediately below Cote St. Paul Lock, was removed in April last, and replaced by a substantial dry stone rubble wall, measuring 525 feet in length, 4 feet wide at bottom, carried up to a width of 3 feet at top, and averaging 13 feet in height, with four openings as tail-races to the mills at that point.

This work was done under contract by Mr. Alexander de Lorimier, and was completed to surface water for opening of navigation on 21st of April, 1889, the remainder, or work above water, being finished before the end of the month.

The openings in the wall were bridged over and the wall itself connected with the mooring pier at the north-eastern end of the lock by a bridge 55 feet in length, for towing purposes.

During the months of September and October, 1888, the survey staff employed on the Richelieu River, under Mr. L. S. Pariseau, C.E., made a survey of a portion of the town of Lachine and of the low ground between it and the River St. Pierre. The object of this survey was to find a proper outlet for the drainage water of the low portion of that town.

From the 20th May up to the end of the fiscal year the above staff was also engaged in making surveys and taking levels along the north boundary of the Lachine Canal, in view of a proposed drain to carry off the leakage water of the canal into the River St. Pierre.

BEAUHARNOIS CANAL.

This canal was closed on the 1st of December, 1888, and re-opened to navigation on the 17th of April, 1889. No accident occurred, and consequently there was no interruption to navigation during the fiscal year.

The work done during the lapsed year is described under two headings, viz.: Ordinary Repairs and Income.

REPAIRS.

Locks and Lock Gates.

One pair of gates were built and placed in the lower recess of Lock No. 12, and the old gates were brought down to the work shop and taken apart.

The foot bridges of the gates at Locks Nos. 6, 11 and 14 were renewed, and new valves placed in one of the gates at Locks No. 11. The lower gates of Locks Nos. 6, 8 and 10 were raised and new heel plates provided for same. Chains for gates at Locks Nos. 10, 12 and 14 were renewed, and three ladders placed in man holes.

Bridges.

The swing bridges at Locks Nos. 7, 11 and 12, the St. Timothy bridge, as well as the waste weir at Lock No. 12, were overhauled, and received the necessary repairs. All the farm bridges were kept in good order.

Banks, Dykes, Dams, &c.

Considerable repairs were made at Hungry Bay during the year. About 250 toises of stone were placed on the dyke and afterwards covered with gravel. This had the effect to considerably raise the bank to protect the lands adjoining from being flooded and, further, to provide good travelling accommodation for the public.

The canal banks have been maintained in good order. The sides or slopes were repaired, and about two miles of the tow path on the north side have been macadamized and the whole bank kept in excellent order.

The culvert wells, discharges, drains and side ditches were cleaned last summer, and in the spring were cleared of snow and ice.

The weeds were removed on both sides of the canal at the proper time.

Four new guard posts were placed at each of the Locks Nos. 6, 7, 13 and 14.

One hundred mooring posts were set on both sides of the canal where required, and several posts which had been pulled out by vessels or disturbed by frost were set again.

Buildings and Fences.

A new barb-wire fence was erected on the canal in front of the strip of land purchased in December last from Mr. Etienne Payment, and all the other fences were kept in good repair.

The lockmaster's, lockmen's houses and lock shanties were repaired and re-painted.

Wharves.

The banks forming the upper entrance of the canal at Valleyfield have been raised by 4 feet, and faced with a dry rubble stone wall for a distance of half a mile on each side, the whole being covered with a superstructure of timber consisting of two square pieces 12 in. x 12 in., firmly secured in the rear to another piece of square timber in the bank by means of traverses laid 4 feet apart.

The construction of these wharves has proved very beneficial to navigation, and has been the means of efficiently protecting the adjoining town properties against the high waters.

INCOME.

The new dredge, No. 2, was stationed during the whole season at Valleyfield, and employed at deepening the canal entrance to a 10 feet draught and widening that

portion of the canal by at least 10 feet. The material excavated was utilized in raising the banks and as filling for the wharves built at that place.

The entrances to the main feeder of the Montreal Cotton Company and Buntin's paper mills were cleaned and deepened, and some dredging done in the bay close to the site of the lower dam connecting Valleyfield with the Grand Ile.

During March and April the dredging fleet on this canal was overhauled and repaired; the hull of the dredge and scows were caulked and painted, and the machinery fitted and everything put in readiness to resume operations in the spring.

CHAMBLY CANAL.

This canal was closed by ice on the 22nd of November, 1888, and re-opened to navigation on the 29th of April, 1889. No accident occurred, and no detention was caused to the trade.

Considerable works were executed during the fiscal year, and are described under two heads, viz.:—

Ordinary Repairs and Improvements chargeable to Income.

REPAIRS.

One pair of lock gates were built, and placed in the upper recesses of Lock No. 8, and the mitre sill entirely rebuilt.

All the buildings, dwelling houses and bridges were kept in good order, and painted when required.

The roadway at Rivière aux Iroquois was raised by 18 inches, covered with gravel and rolled.

The superstructure of the landing above Bridge No. 7, which measures 275 ft. by 60 ft. was entirely renewed.

The Government lots upon which are erected the dwelling houses of Lockmasters Nos. 4, 5, 6, 7, 8 and 9, and of Bridge Tender No. 6, were fenced in with wire fences.

Seven thousand feet of wooden railing or garde-corps were replaced by a $\frac{3}{4}$ inch wire cable with metallic caps on head of each post, with swivels at different points to tighten the cable when required.

Four and one-half miles in length of ditches were cleaned between Lock No. 2 and the lower extremity of Ile Ste. Thérèse.

During April the slope walls of the canals were repaired, the bottom cleaned and sixty mooring posts renewed. The bottom and sides of tail race of the new waste weir or by-wash above Lock No. 2, was planked so as to prevent under-mining.

Repairs to road and swing bridges, by-washes, culverts and ditches, fences, ferry and canal scows, have been made when required, to ensure efficient working of the canal during the year.

IMPROVEMENTS CHARGEABLE TO INCOME.

The work done on this canal during the lapsed fiscal year under the head of Income is subdivided as follows:—

1st Dredging.

The work done by the dredging fleet consisted principally in deepening the canal entrance in the harbor of St. Johns, P.Q. Cuts were also made at different points in the canal for the meeting of vessels, and the excavated material used in filling in behind the inside and outside slope walls, in raising the canal banks at different places, as well as the wharves in St. John's harbour.

2nd. Inside Slope Walls between Ile Ste. Thérèse and Langelier's Mill.

Twelve thousand feet in length of dry rubble walls by 2 feet in width were built between the above named points, the bank raised and 4,290 tons of gravel laid on the tow path.

3rd.—Piers and Booms, St. John's.

In order to protect the boats against the strong current existing between the C. V. R., drawbridge and the extremity of the long entrance wharf—three piers two 15 feet by 15 feet and one 25 feet by 15 feet—were built and placed 50 feet apart, as an extension to said wharf, and three booms measuring 205 feet placed in position.

4th.—Wharves 1, 2 and 3, St. John's.

Wharf No. 1, although not provided for in the estimate, received an additional tier of timber 1 foot high by 250 feet in length, and a face sheeting of 3 inch pine plank.

Wharf No. 2.—The wooden superstructure of this wharf, which measures 664 feet by 5 feet in height, has been entirely taken down and re-built.

These two wharves, as well as Wharf No. 3, adjoining, were filled in, levelled covered with a good layer of gravel (4,000 tons.)

5th.—Fence in Town of St. Johns.

The money voted for this purpose (\$500) was utilized in repairs to the existing fence.

6th.—Culvert, Rivière aux Iroquois.

To obviate the claims of adjoining proprietors, who were continually complaining about the flooding of portions of their lands, caused by the bad state of said culvert, it was completely taken up and re-built during March and April last.

7th.—Stop Logs at Bridge No. 1.

With a view of more easily contending against water in case of a break in the canal bank, between Ile Ste. Thérèse and Lock No. 2, the abutments at Bridge No. 1 were sheeted with plank, and a bottom platform built, so as to receive a set of stop-logs when required.

8th.—Machinery.

The sum of \$2,200, granted in the fiscal year's estimates, 1888-89, was utilized in purchasing and placing in position in the new workshops machinery (driven by steam power) considered to be the most required for the wants of the canal.

This has proved to be a very valuable improvement, and will effect a considerable yearly saving in doing the work.

9th.—Lighting St. John's Harbor.

Eighteen coal oil lamps were erected and placed on the wharves and canal entrance pier in the harbor of St. Johns.

10th.—Re-building Locks Nos. 4 and 6.

As foreseen in last annual report, portions of the west chamber wall of Lock No. 4, and east chamber wall of Lock No. 6, had to be taken down, and were re-built during the winter.

11th.—Repairs to Dredge No. 1.

The dredging fleet was thoroughly overhauled and repaired during the winter; the hulls of the dredge and scows were caulked and painted, and the machinery received some slight repairs.

ST. OURS LOCK.

This lock was closed on 24th of November, 1888, and re-opened to navigation on the 19th of April, 1889.

There was no accident or delay, nor was it necessary to impose any fine for damages or violation of the canal regulations.

The walls of the lock were pointed ; some leaks under the upper mitre sill and walls were stopped with gravel. The gates also received sundry repairs, and other mechanical structures kept in good order.

The banks on the west side of the dam were raised and strengthened with stone and gravel. The piers were repaired. The ice was cut away from the piers and lock gates, and the gates were loaded down, to prevent their being lifted by high water in the spring.

The booms were removed in the fall, placed in winter quarters, and replaced in the spring.

The Superintendent's house, out buildings and fences received the usual repairs.

INCOME.

At the close of navigation work was commenced towards extensive repairs to bottom of this lock. This work was carried on under the immediate supervision of Mr. L. G. Papineau, C. E., who was detached from the Richelieu River survey staff for the purpose, and is fully described in his subjoined report.

RICHELIEU RIVER SURVEY.

The hydrographic survey of the Richelieu River was continued during the year, and was confined to that portion of the river between Ile Ste. Thèrese and Chambly.

Mr. L. S. Pariseau, C. E., and P. L. S., had charge for most of the time of this survey, replacing Mr. Papineau, who was transferred to St. Ours Lock as engineer in charge of works of re-construction.

I append his report on the work done during the year.

I have the honor to be, Sir,

Your obedient servant,

E. H. PARENT,

Superintending Engineer.

LACHINE CANAL.

STATEMENT showing the depth of the River Water on the Mitre Sills of Lock No. 1 at Lower Entrance and Lock No. 5 at Upper Entrance during the Fiscal Year ending 30th June, 1889. (From Lockmaster's Returns.)

Months.	Lock No. 1, Lower Sill.		Lock No. 5, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1888.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	20 6	17 10	12 8	11 1
August.....	17 11	17 3	11 1	10 8
September.....	17 6	16 9	10 9	10 3
October.....	17 3	16 4	10 5	9 10
November.....	20 1	16 7	12 4	9 11
December.....	27 0	16 6	11 9	9 10
1889.				
January.....	34 10	23 11	12 2	10 3
February.....	31 6	26 7	11 9	9 8
March.....	29 0	26 8	11 8	9 4
April.....	33 11	19 10	13 7	11 2
May.....	23 1	19 7	13 10	11 11
June.....	22 6	19 9	14 0	10 10

BEAUHARNOIS CANAL.

STATEMENT showing the depth of the River Water on the Mitre Sill of Lock No. 6 at Lower Entrance and Lock No. 14 at Upper Entrance, during the Fiscal Year ending 30th June, 1889. (From Lockmaster's Returns).

Months.	Lock No. 6, Lower Sill.		Lock No. 14, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1888.	ft. in.	ft. in.	ft. in.	ft. in.
July.....	12 7	11 3	11 11	11 9
August.....	11 2	10 3	11 10	11 6
September.....	10 3	9 7	12 0	11 5
October.....	9 6	9 4	11 8	11 2
November.....	10 10	9 5	12 2	11 3
December.....	12 8	9 7	12 0	11 5
1889.				
January.....	14 10	12 8	13 0	11 3
February.....	16 10	15 0	12 10	11 0
March.....	15 6	11 4	12 4	10 10
April.....	13 8	11 5	12 10	11 10
May.....	13 5	11 10	12 6	11 10
June.....	13 10	11 9	12 10	12 0

CHAMBLY CANAL.

STATEMENT showing the depth of the River Water on the Mitre Sills of Lock No. 9, at Lower Entrance and Lock No. 1 at Upper Entrance, during the Fiscal Year ending 30th June, 1889. (From Lockmaster's Return).

Months.	Lock No. 9, Lower Sill.		Lock No. 1, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1888.	ft. in.	ft. in.	ft. in.	ft. in.
July	12 6	10 3	10 9	9 3
August.....	10 6	9 7	9 5	8 9
September.....	10 11	10 1	9 8	8 8
October.....	12 6	10 6	10 2	9 2
November.....	15 7	12 4	11 10	9 6
December.....	16 7	11 5	11 0	10 3
1889.				
January	17 1	14 7	11 10	10 9
February	18 8	15 3	10 4	9 6
March	17 0	14 6	10 6	9 2
April	16 6	13 10	11 2	9 11
May.....	15 10	13 2	10 6	9 1
June	14 1	13 0	9 8	8 8

ST. OUR'S LOCK.

STATEMENT showing the depth of the River Water on the Mitre Sills of St. Our's Lock, during the Fiscal Year ending 30th June, 1889. (From Superintendent's Return).

Months.	Lock No. 1, Lower Sill.		Lock No. 1, Upper Sill.	
	Highest.	Lowest.	Highest.	Lowest.
1888.	ft. in.	ft. in.	ft. in.	ft. in.
July	12 5½	9 2	10 8	9 2
August.....	9 11	8 5	9 3	8 8
September.....	9 10	8 2	9 9	8 11
October.....	9 11	8 7	10 5	9 4
November.....	15 10	9 9	12 9½	10 6
December.....	16 6	9 10	12 9	10 0
1889.				
January	16 0	13 6	12 11	10 6
February	13 4	11 4	10 9	9 9
March	16 4	12 4	12 10	9 11
April	16 2	14 7	13 8	10 10
May.....	16 9	12 3	13 5	11 1
June.....	14 7	12 8	11 10	10 11

LACHINE CANAL.

STATEMENT of Fines and Damages collected during the Fiscal Year ending 30th June, 1889.

Date.	Names of Vessels.	Name of Owner.	Fines.	Damages.	Totals.
1888-89.			\$ cts.	\$ cts.	\$ cts.
Sept. 22..	Steamer "Silver Spray".....	Sincennes & McNaughton Line.....	10 00	12 00	22 00
Oct. 1....	do "William Paul".....	Narcisse Paul.....	20 00		20 00
" 12....	Barge "Brodeur Demerse".....	Damase Leroux.....	10 00	4 00	14 00
Nov. 14....	do "Hebert".....	C. Lamarche.....	5 00		5 00
June 17....	Steamer "E. B. Eddy".....	D. Murphy & Co.....	10 00		10 00
		Totals.....	55 00	16 00	71 00

JOHN O'NEIL,
Collector.

CANAL OFFICE,
MONTREAL, July, 1889.

LACHINE CANAL.

STATEMENT of Amounts collected for Wood Dues and Winterage of Vessels, during the Fiscal Year ending 30th June, 1889.

Date.	Items.	Amounts.
1888-89...		\$ cts.
	Wood dues.....	648 91
	Winterage.....	301 27
	Total.....	950 18

JOHN O'NEIL,
Collector.

CANAL OFFICE,
MONTREAL, July, 1889.

LACHINE CANAL.

STATEMENT of Wharfage, Basin and Bank Dues collected during the Fiscal Year
ending 30th June, 1889.

Date.	Items.	Amounts.
		\$ cts.
1888-89...	Wharfage dues	47 58
	Basin dues	1,340 78
	Bank dues	46 00
	Total	1,434 36

J. B. DESCHAMPS,
Per Collector.

CANAL OFFICE,
LACHINE, July, 1889.

APPENDIX No. 8a.

MONTREAL, 1st July, 1889.

SIR,—I have the honor to transmit my annual report upon the various surveys under my charge during the fiscal year ending 30th June, 1889. These surveys were made along the Richelieu River, at the towns of Lachine, St. Johns and along the Lachine Canal.

Richelieu River.

The hydrographic survey of this river, between the foot of Ste. Thérèse Island and the Chambly Basin, a distance of about six miles, was resumed on the 22nd of August, 1888, and continued until the latter part of November following. The extraordinary wet weather experienced during the last season, and the temporary absence of myself and assistants on other works, have been serious impediments to the rapid progress of the outside work, and of this section there remains one and a-half mile yet to be surveyed.

The mode of proceeding with the survey of this river has been the same as during the previous years. An accurate triangulation was first made and auxiliary lines were run between the triangulation points, for the purpose of laying out the sounding lines and taking the topography of the shores.

Soundings have been taken on lines across the river every 200 feet, from the foot of Ste. Thérèse Island to some distance in the Ste. Thérèse Rapids.

The topography of the west shore has been taken as far back as the Chambly Canal, in view of the general plan now in course of preparation for the Superintendent's office of this canal.

In compliance with instructions received from your office, the work on the Richelieu River was interrupted from the 15th to the 22nd of October, 1888, and the staff proceeded to the town of St. Johns, where measurements and levels were taken along Richelieu street, from a point opposite the military school, to another point below Langelier's Mill. This work was made in connection with a proposed collecting drain along the above street, to carry the sewage water of the town under the Chambly Canal into the Richelieu. At present, all the sewers of St. Johns have their outlets right opposite the town and into the Chambly Canal, whose water is thus contaminated and rendered injurious to the health of those residing along the line of this canal.

During the fall of 1888 a survey was made of a portion of the town of Lachine, and of the low grounds lying between it and the River St. Pierre. Numerous levels were also taken. The difference of level between the surface of the water inside and of the water outside of the wing-dam at the upper entrance of the Lachine Canal were ascertained.

The object of this survey and levelling was to find a proper outlet to the drainage water of the town of Lachine, there being serious objections against this town emptying its sewers into the Lachine Canal.

To do this work, which lasted from the 22nd of September, 1888, to the 15th of the following month, the survey of the Richelieu River was not interrupted, but its progress was seriously interfered with.

From the 22nd of May, 1889, to the end of the fiscal year, I have been engaged with my assistants in making surveys and taking levels, in view of a proposed drain along the north boundary of the Lachine Canal, to carry all the leakage of this canal and possibly the sewage water of the town of Lachine into the River St.

[1889]

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Pierre, at a point nearly opposite the Côte St. Paul Canal bridge. The drainage of the Côte St. Paul swamp has also been kept in view while doing the above work.

During the period of time between the 23rd of November, 1888, and the 20th of May, 1889, only office work has been done.

The plans and profiles of the works done at Lachine and St. Johns were first made and transmitted to your office during the months of December and January.

During the latter portion of the winter season my assistant and I were kept busy making copies of the above plans, working at the general map of Richelieu River below St. Johns, and preparing a general plan of the Chambly Canal for the Superintendent's office.

I have the honor to be, Sir,

Your obedient servant,

L. S. PARISEAU,

Resident Assistant Engineer.

E. H. PARENT, Esq.,
Superintending Engineer of Canals,
Montreal.

APPENDIX No. 8*b*.*(Translation.)*

ST. OURS, November 1, 1889.

SIR,—I have the honor to submit my report on the works executed at the St. Ours Lock during the fiscal year 1888–89:—

In the month of June I was requested by a letter dated 21st of said month, to examine the locality and the nature of the bottom of the river in the neighborhood of the St. Ours Lock, in order to determine the most suitable location for the establishment of two cofferdams, one at the head, the other at the foot of the lock, in view of repairs to be executed in the bottom of said lock.

In selecting this location, I was guided by the following considerations:—

1. The cofferdams should be built in the immediate vicinity of the lock, so as to give these works the smallest dimensions possible.

2. This location, however, to be at a sufficient distance to give free access to all the parts of the lock walls, in case it should be deemed necessary to demolish the walls partly or in totality.

At first a less expensive mode had been considered, that is, the dam with stop logs in the checks existing at each end of the lock, but the doubtful state of the bottom would not allow the adoption of this system. In fact, great difficulties would have been met with in making a water-tight dam at these points, as was ascertained after the water was out of the lock.

As to the construction of the cofferdams proper, several conditions imposed themselves:—

1. A certain character of durability that would allow the resuming of the works in a following year, if it became necessary.

2. A free passage for navigation to the close of the season.

3. Sufficient strength to resist a head of water 16 feet at the upper dam, and of 20 feet at the lower one.

4. Possibility of re-opening in spring a passage for navigation without totally demolishing the works.

Under these conditions the following system was adopted:—

Each coffer dam to be composed of two piers with vertical sides, leaving between them a clear space equal to the width of the lock.

These piers, loaded with stone, form abutments for the moveable caisson which is intended to close the open space when the navigation season is over.

Next come two caissons with their outside face inclined 45°, supporting a double sheeting similarly inclined. A thick layer of clay is spread over this sheeting.

These last mentioned caissons connect the abutments with the shore, in which they are securely bound. They are also filled with stone.

Finally the cofferdam is completed with a moveable wedge-shaped caisson, intended to close at will the opening left for passing vessels.

The annexed plan will show the general disposition of the two coffer dams. The upper one measures on its outer face 214 feet in length, and the lower one gives a total length of 237 feet.

The latter on the south-east side has been extended on a parallel line with the lock walls, in order to avoid the connection of the cofferdam with the lock embankment at a point where this embankment was narrow and where leakages were to be feared through the dry stone wall protecting the end of the lock.

CONSTRUCTION OF THE SEVERAL PORTIONS OF THE COFFER DAM—UPPER END.

The moveable caisson measures 66 feet outside and 52 feet inside, by 13 feet in width. It is built of hemlock plank, laid flat and cross-jointed, forming three vertical partitions in longitudinal line, the two first on the outside, being close jointed, the third one open-jointed.

It is sub-divided in its length by five transverse partitions in plank, which are close-jointed in the outer portion and left open-jointed in the rear portion of the caisson.

The intersections of the two longitudinal partitions with their transverse partitions, all water tight, therefore form six compartments with solid sides but open at the bottom.

These compartments measure inside 4 feet wide, and are filled with puddle clay, carefully rammed so as to ensure the tightness of the partitions. The puddle also spreads on the natural bottom of the river and remedies its unevenness.

This plank framing is bound together with 1 inch diameter round iron bolts, 4 feet long, driven at each intersection of the longitudinal and transverse pieces.

To avoid filterings, which might have taken place under the cofferdams, its upper face was covered with a row of sheet piles, with a puddle clay embankment outside.

The moveable caisson when brought into position is loaded with stone, so disposed on a platform, a few feet only below the surface, that they can be removed in spring before the water is let into the lock.

The abutment piers are built in the same manner as the moveable caisson, but they are much more loaded with stone.

The inclined face piers are built of flatted timber, 1 foot or more in thickness. The pieces are simply superposed and bolted together with $\frac{3}{4}$ -inch square bolts at each intersection, which go through two timbers, and half the third one.

The battered face only is planked, so as to give a uniform slope of 45° ; it is then sheeted with two layers of 2-inch sheet piles overlapping the joints, and which are driven down with a 300 lbs. pile-driver to a depth of 3 feet to 5 feet, as required, so as to go through the muddy bed covering the bottom of the river.

The width of these caissons, which is 20 feet at the base, decreases with the height, so as to be about 8 feet only at the top.

In order to secure good circulation facilities on top of the caissons, the upper transverse ties were extended inwards, and planked so as to give a platform 13 feet wide (this is not indicated on the drawings), which allowed the tombereau carts to reach every point of the slopes where the clay had to be dumped. In order to cross the space left open a moveable bridge was established on the large scow used for repairs so that the carts could convey the clay directly to all parts of the cofferdam.

The cofferdam at the lower entrance is built on the same principle, there are, however, some peculiar points worth noticing.

In the location selected for its erection the bottom was filled with loose stone which had been dumped there some time after the lock was built, to resist the washing away of the bottom, caused by the rush of water through the gate valves.

It was not prudent to build a dam on this bed of stones, through which water could easily find its way, and it was therefore necessary to use a dredge and clean out the channel to its natural bottom.

It was then found that the bottom, was a bed of grey quicksand, through which the least filtering taking place leakages would become uncontrollable.

In order to obviate this risk, a layer of earth, 2 feet deep, was spread over the bottom, extending about 10 feet in front of the dam. The centre caisson was then brought into position and loaded with stone, as the one at the upper entrance; but instead of facing it with sheet piles, tarpaulins were used to cover the angle formed by the bottom and vertical face of the caisson. Those tarpaulins cover about 10 feet of bottom in front of the caisson and rise 6 or 7 feet along its vertical face. The angle was then filled with clay to a height of about 12 feet.

This method has proved successful, and no leakage has been noticed under the moveable caisson.

PROGRESS OF WORKS.

The building of the cofferdam was commenced on the 19th of September, but the works were delayed by continuous wet weather and high water in the river. Much difficulty was experienced in driving the sheet piles of the upper cofferdam, the bottom of the river being strewn with stone, and sticks of timber sunk in the mud. These had to be removed by the diver—a slow and tedious work.

At the lower dam but few difficulties were met with on that account, but the depth being greater and the water at a high level, very long timbers had to be used, and it was also more difficult to obtain an uniform surface; on the other hand, the constant thaws which took place during the months of November and December allowed clay to be procured in good condition for the puddling remaining to be done.

Finally, the cofferdams could only be completed about the latter end of December, and about that time a most unusual rise took place in the river, which compelled the trial of the cofferdam and pumps to be put off until the commencement of January.

It was then ascertained that the steam boiler which was expected to drive the pumps was insufficient, and we had to devise the means of procuring an additional pump and another boiler to supply steam.

The works were suspended, and it was only in February that the state of the roads permitted the conveying from Sorel of this machinery.

We at last succeeded in working a 6 inch centrifugal pump and emptying the lock to within $1\frac{1}{2}$ feet from the bottom, where the water remained in the centre portion of the lock, which is lower than the rest. It was also necessary to haul out the ice which had formed in the previous month to a depth of 2 feet. After this operation it became easy to examine the state of the lock and find out the most important damages it had sustained.

The season being then much advanced, we came to the conclusion that the needed repairs were too considerable to be executed before the re-opening of navigation, and that it was more advisable to put off the whole until next fall.

Precautionary measures were taken to prevent the damages being increased during the coming season of navigation, and while the lock was emptied the walls were carefully pointed below the line of low water.

The only thing now left to be done was to put the lock in readiness for navigation. For this object Dredge No. 1, which had wintered in the Chambly Canal, was available.

Under the circumstances the Dredge could only reach the cofferdam at the upper entrance of the lock, and unless it could pass over the St. Ours Dam it would not be able to reach the cofferdam at the lower entrance of the lock.

Ordinarily this would have been practicable, but this year no vessels could pass over the St. Ours Dam.

The operation was attempted by means of levers and pulleys, but the mass of clay dumped on the face of the cuisson resisted and the latter was divided into two portions, 10 feet each in height; the upper half was raised, but the remainder stuck to the bottom. However, this giving a depth of 6 or 7 feet, the dredge could easily pass over.

As soon as the river was free of ice from Chambly, the dredge was taken down to St. Ours and went to work removing the clay dumped on the face of the upper central caisson; then with levers and pullies the moveable caisson was loosened from its abutments, taking an inclined position; the current then took effect and the puddle was washed away at the bottom and the caisson floated.

The dredge could then enter the lock and pass over the lower dam. The dumped clay was removed, as at the upper dam, and with pulleys and crabs the lower half of the caisson was removed; thereby a free passage for navigation was established.

CONDITION OF THE ST. OURS LOCK.

The masonry of the lock has not suffered since the forty years it is built. Below the level of low water it is in a good state of preservation, and does not seem disturbed, except at the western end of the wall, where it appears to have settled about 2 inches on its foundation.

Above low water line the masonry is more damaged, a sliding inwards having taken place between the different beds; but nowhere a vertical deviation of more than 2 inches on the total height of the wall, has been noticed. These deviations are more noticeable in the neighborhood of the hollow quoins and the chain holes. The chamber walls, although in a better condition, indicate, however, according to recent measurements, compared with the original dimensions of the lock, that the upper portions of the walls have inclined towards the centre. The cement in the joints seems solid, save a few leakages near the hollow quoins. These walls, according to their present appearance, are sound for many years more.

The bottom of the lock is not in so good a condition; the platform above the upper sill or the flooring of the recess is a simple layer of 4 inch oak plank, the joints of which have been worn out by the action of water, and in some cases to $\frac{1}{2}$ an inch wide. This existing over the whole length of the platform and between each plank, it is readily understood that a large volume of water can thus find its way.

That is what happened: the water must have found its way under the sheet piling partitions driven at each end of the platform supporting the sill. In fact, it has been ascertained that under the whole flooring of the recess the puddle rammed between the piles and between the transverse flooring beams had been washed away, and holes 10 feet deep were found alongside the sheet-piles.

These holes had been partly filled up with large quantities of gravel, dumped there for the last three or four years; but two remained to show to what extent the bottom soil had been washed away. The outlet of these leakages is found underneath the platform upon which the masonry sill or breast wall is built. About that spot several planks of the flooring had been lifted by the under pressure of the water, and for some years past accumulations of earth and gravel around the openings proved the action of water under the flooring and the sill.

Another leakage took place under the recess wall on the west side, which undermined the embankment in rear of the wall and caused a portion of it to cave in. The outlet of this leak could not be ascertained, the stream having been choked with gravel and pounded clay.

The platform of the lower sill is not in a better condition; there, also, the sills have been deeply undermined, and the loss of water has sometimes been so considerable that the working of the upper gates becomes most difficult in consequence of the lowering of the level in the chamber.

REPAIRS REQUIRED.

After the examination we made of the St. Ours Lock, and upon such information as we could gather as to the mode of construction of this and other locks in the same period, I come to the following conclusion:

It is not necessary to pull down the masonry, which is sound, especially under low water line, and it would be very difficult, unless it was completely demolished, to modify the present lock so as to increase its depth, as it had been proposed at first. Therefore, the only thing now to be done is to repair the lock in its present state.

The flooring must be renewed entirely, except the oak planking in the upper and lower recesses, which will require only slight repairs.

The bottom of this lock being strewn with springs it will be necessary, in order to make it water tight, to substitute for the puddle originally used under the floorings beds of concrete, of such a depth as can meet the pressure to be supported.

We might take advantage of the lock being empty during the progress of the above work to establish a strong sheet-pile partition, backed with a concrete wall at

both ends of the lock, and in line with the stop-log checks now existing. This would answer for unwatering the lock when future repairs will be required.

We could also, at the foot of the lock and beyond the king walls, spread a layer of stones, hand-laid, over a bed of broken stones, in order to prevent the washing of the bottom, as it took place formerly, since the building of the lock, and would still take place if the bottom was not protected against the rush of water from the gate valves at each lockage.

I have the honour to be, Sir,

Your obedient servant,

L. G. PAPINEAU,

Resident Assistant Engineer.

E. H. PARENT, Esq.,
Superintendent Engineer Canals,
Montreal.

APPENDIX No. 9.

OTTAWA RIVER CANALS.

SUPERINTENDING ENGINEER'S OFFICE,
OTTAWA, 3rd September, 1889.

SIR,—I have the honor to submit herewith my report for the fiscal year ending 30th June, 1889.

CONSTRUCTION.

No works under the head of construction have been called for.

MAINTENANCE.

St. Anne's Canal.

Navigation here closed on the 22nd of November, 1888, and was re-opened on the 19th May, 1889.

Required ordinary repairs have been made to the locks and lock-gates, as well as to Government buildings, fences, roads, &c., &c. The piers marking the channel above lock, and for guiding vessels into the entrance, have been raised 3 feet higher than they were left by the contractor for construction, in order to increase their usefulness in time of high water. Two small piers have also been erected in Isle Perrot Bay, for the purpose of wintering booms to, and ordinary repairs made to other piers, booms, scows, &c.

Navigation has been carried on in a smooth and regular manner, having received no interruption from any cause throughout the year.

Carillon Canal.

Navigation closed here on the 2nd December, 1888, and was re-opened on the 26th April, 1889.

A stable and woodshed were built in connection with the house provided for the Tollecollector, and a wire fence erected round the premises.

The usual repairs have been made to Locks 1 and 2, and such strengthening and repair to the entrance piers and booms as showed itself to be necessary attended to.

The southern retaining wall of the canal basin has undergone a general course of re-pointing.

The new scows for the purpose of diving and the transport of material for canal uses have been constructed and placed at work.

The Government roads have received all necessary attention, as also the bridging, fencing, and ditching, and everything about the canal shows itself to be in a sound and durable condition.

Grenville Canal.

This canal was, like the Carillon, closed on the 2nd December, 1888, and re-opened on the 26th April, 1889.

The locks Nos. 3, 4, 5, 6 and 7 have undergone thorough examination, and received all necessary repair, as well as their gates and appurtenances, which have been re-painted.

The swing bridge at Grenville (now an old structure) has received a thorough overhauling, and any decayed or weakened portions of it have been removed and replaced.

The same can be said of the one at Lock No. 5, though it is getting into so unsound a condition that it cannot be long before a total renewal will be here required.

The fencing round the various lock stations has received attention, and been re-painted where necessary.

The banks along the prism of the canal have received the usual annual amount of attention and repair, and damaged portions of the present boulder-retaining work been rebuilt. The culverts along the canal have been examined and thoroughly cleaned out.

No interruption to the traffic from any cause occurred throughout the year, and the general working of the canal has been regular and satisfactory.

Culbute Canal.

This canal has had the small amount of traffic through it that exists for it. And what repairs were found necessary for keeping the locks available have received due attention.

I have the honor to be, Sir,

Your obedient servant,

D. STARK,

Superintending Engineer.

A. P. BRADLEY, Esq.,

Secretary Department of Railways and Canals.

APPENDIX No. 10.

RIDEAU CANAL OFFICE,
OTTAWA, 19th Sept., 1889.

SIR,—I have the honor to submit my annual report on the state of the works under my charge for the fiscal year ending 30th June, 1889.

Navigation closed at Ottawa 22nd November and at Kingston Mills 23rd November, 1888.

Opened at Ottawa 22nd April and at Kingston Mills 29th April, 1889.

On the descending reaches from the Little Rideau Lake (Summit) towards Ottawa, the water was maintained to give the full depth required on the lock sills until the close of navigation.

On those descending towards Kingston the water fell below navigation height on the upper still at Newboro' lock by the 8th July, and continued falling until the close of navigation, when it was one foot below the ordnance standard.

At Kingston Mills the water fell by July to 1 foot 2 inches below the ordnance standard, but recovered by the fall rains a few inches towards the close of the season.

This year, although the snow fall was exceptionally light, with no spring freshet to speak of, the continuous rains experienced in the spring brought all our levels up to the full height, and our waste weirs had then to be kept open until the end of July to carry off the flood water a state of things which has not occurred for the last twenty years.

The old dam at the foot of Hart Lake was renewed, and also a dam at the outlet of Rock Lake the latter was cut away in the spring by some parties who considered their land would be affected by its reconstruction.

An agreement was also entered into whereby the old ordnance dam at the outlet of Wolfe Lake will be restored, which expenditure will materially assist the supply of water in the Upper Rideau, and remedy, to a certain extent, the low water on the upper sill at Newboro'.

It is expected that next year a dredge will be at work on the canal, so that the deepening of the shallow cuts and the tightening of the dams can be proceeded with.

The principal repairs to the works at the several stations were as follows:—

Kingston Mills.

Lower lock gates renewed, long bridge over the by-wash re-planked, six new swing beams, repairs to lockmaster's house.

Brewer's Lower Mills.

Seventy-five yards of gravel placed on lock and dam.

Brewer's Upper Mills.

Centre gates renewed, and repairs to lower gates.

Brass's Pond.

Built a lodge for bridge-tender.

Jones' Falls.

Upper wing wall of masonry taken down and re-built; repairs to dam at Morton, and general repairs to lock gates.

Davis's Lock.

Lock pumped and lower sill renewed; four new snubbing piers at head of lock.

Newboro'.

Cleaned out cut with diver, reconstructed block house for lockmaster's residence.

Narrows.

Re-built bulk-head and bridge over by-wash, and repaired piers above and below lock.

Oliver's Ferry.

Renewed swing bridge.

Poonamalie.

Built one pair of lock gates; repaired upper gates.

Smith's Falls (detached).

Repairs to lockmaster's house.

Smith's Falls (combined).

Laid foundation for a new iron swing bridge; built piers in basin for protection of same.

Old Sly's.

General repairs to station.

Edmond's.

General repairs to station.

Kilmarnock.

New swing bridge complete, and repairs to gates.

Merrickville.

General repairs.

Clowe's Quarry.

Sixty loads of broken stone put back of stone dam.

Nicholson's.

One pair of lock gates rebuilt, and new chain blocks.

Long Island.

New stone sill put in middle lock, and general repairs to station.

Black Rapids.

Repairs to upper gates.

Hogsback.

General repairs to station.

Hartwell's.

General repairs to station.

Dow's Swamp.

Repaired break in south embankment.

Little's Bridge (Bank Street Road).

Renewed swing bridge and piers of same.

Ottawa.

Renewed one pair of gates; raised and re-planked long wharf at basin.

Works for which Special Appropriations were made.

The new iron swing bridge at Smith's Falls was completed, also the fencing to approaches, and the bridge opened for traffic.

Timber was delivered for the new dam at the outlet of Wolfe Lake.

Navigation was maintained without any interruption.

Returns show an increase in the lockages.

I have the honor to be, Sir,

Your obedient servant,

FRED. A. WISE,

Superintending Engineer.

A. P. BRADLEY, Esq.,

Secretary Dept. of Railways and Canals,
Ottawa.

APPENDIX No. 11.

TAY CANAL.

RIDEAU CANAL OFFICE,
OTTAWA, 19th September, 1889.

REPORT OF PROGRESS FOR THE YEAR ENDING 30TH JUNE, 1889.

The Messrs. W. Davis & Sons commenced work on their contract from Craig street to the south side of Peter street, including excavation of old basin, building wharves, deepening the river, building masonry for three swing and fixed bridges, in September, and carried the work on with unusual energy, so that the main portion of the work was nearly finished by the end of January, leaving only the deepening of the river between Craig street and the basin to complete the contract, which does not expire during this fiscal year.

A dredge suitable for the work was especially ordered by the contractors from a Welland firm, but it had not arrived on the ground by the 30th June.

The contractor for the steel bridges, as soon as the masonry was ready, completed his contract, and the road traffic is now carried over them.

Steamers have been allowed at their own risk to use the canal, so far as completed, all the season.

I have the honor to be, Sir,

Your obedient servant,

FRED. A. WISE,

Superintending Engineer.

A. P. BRADLEY, Esq.,
Secretary Department of Railways and Canals,
Ottawa.

APPENDIX No. 12.

TRENT CANAL.

PETERBOROUGH, 12th November, 1889.

SIR,—I have the honor to submit the following report on the works under my charge for the fiscal year ending 30th of June, 1889.

Navigation closed on the 22nd of November and opened again on the 17th of April. The water on the several stretches was good, there being between 5 feet 6 inches and 6 feet on the sills till near the close of navigation. There was very little Spring freshet this year and fears were entertained that there would be a scarcity of water before the season was over; I therefore commenced holding the water—closing the dams—much earlier than usual. However, on the last two or three days of May and the first ten days of June there was an extraordinary fall of rain, which, according to the records of the Toronto Observatory, has only been equalled—for the space of time—twice since the year 1854. This rain raised the water in the reservoirs to a great height, but there was no damage done to any of the works. It is impossible to regulate the water to advantage under present circumstances, as all the large reservoirs above Sturgeon Lake are different control.

The total number of lockages (including those at Young's Point) is 2,814. The lock at Young's Point is under the control of the Ontario Government, but it is dependent upon the dams at Lakefield and Young's Point, recently constructed by this Department, to keep the water at proper levels, so that it may be operated. The number of lockages does not fairly represent the traffic on these waters, as the water stretches between locks being long, such as between Lindsay and Bobcaygeon or Chemong and Bobcaygeon, there is considerable traffic between points for which no returns are made. There are at present twenty-one steamers on the stretches between Lakefield and Balsam Lake and six between Peterboro' and Heely's Falls.

The works at the several stations between Trenton and Balsam Lake have been described in former reports. The works of construction and repair for the year are as follows:—

Fenelon Falls.

The corner was broken off one of the valves of the lock gates. This was repaired. The passage through to Cameron's Lake is stopped by the fixed bridge of the Grand Trunk Railway across the river at the head of the canal. This bridge should be provided with a swing before the opening of navigation next season.

Scugog River.

A second beacon has been built at the mouth of the river, and lights have been kept on both, which has been a great benefit to navigation.

Bobcaygeon.

A new dam was built at this station, also a dry dock formed by the extension of two piers of the dam. The dam is 553 feet long, with a 35 foot base, and 20 feet high at the highest part. It has nine 25-foot sluices, one 18-foot sluice and 12-foot sluice; besides, the opening for the dock (35 feet) is provided with stop-logs at the lower end, and may be used as a sluice if required. There is also 75 feet of flat dam on the south side. A dyke made of crib-work runs along the north side of the river from

the end of the dam for a distance of 1,093 feet, with an average height of 7 feet and a width of 8 feet. Beyond this, for a distance of 200 feet, is a face work of timber with ties running into the bank. The dry dock is formed, as has been mentioned above, by the extension of two piers of the dam, and is 170 feet long by 35 feet wide, the natural bed rock forming the bottom. Vessels of 5 foot draft can enter this dock at ordinary low water.

The flooring of the lock chamber was covered with sheets of boiler plate iron three-sixteenths ($\frac{3}{16}$) of an inch thick, the whole being rivetted together and cut to the shape of the chamber. The iron was spiked to the bottom, and the angle formed by the walls and flooring of the lock was filled in with concrete. This has made a perfectly tight bottom at a comparatively small cost. The lower lock gates were lifted and the steps raised.

A new quoin stone was placed for the south-east gate, the frost having cracked the old one so badly that it would not hold the straps of the gate.

Buckhorn.

A quantity of loose rock that had been washed into the lock from the canal above was removed. A dozen "nigger-heads" were placed along the coping of the lock and iron hooks along the piers at the lower entrance. Work was also done on the road leading to the swing bridge.

Burleigh.

Many of the keepers in the valve rods broke off and were replaced in a more substantial manner.

Lakefield.

A landing pier, 425 feet long by 16 feet wide, and an average height of eight feet, was built.

Peterboro'.

Slight repairs were made to the lock gates and also to the dam. The sawdust is a terrible nuisance at this lock, some mornings rendering the lock gates almost impossible to open.

Otonabee River.

The entrance of the river into Rice Lake is by three mouths, all of which were navigable till this last few years. The sawdust has totally closed the east and centre mouths for navigable purposes, and it is only with the greatest difficulty that steamers can pass through the only remaining mouth.

Hastings.

Some repairs were done to the swing bridge and to the lower lock gates.

Trent River.

Boulders were removed from the channel at the shoal known as "Humphrey's Bar."

Chisholm's Rapids.

Some small repairs were made to the dam.

The work of cleaning out the channel between Lakefield and Balsam Lake was proceeded with, work having been done at the Narrows in Katchewanoe Lake, at Bobcaygeon and at several intermediate points. The channel has buoys and beacons placed where necessary.

I have the honor to be, Sir,

Your obedient servant,

RICHARD B. ROGERS,

Superintending Engineer.

A. P. BRADLEY, Esq.,
Secretary Department of Railways and Canals,
Ottawa.

APPENDIX No. 13.

ST. PETER'S CANAL.

OTTAWA, 6th November, 1889.

SIR,—I have the honor to submit the following with reference to the St. Peter's Canal:—

Navigation through the canal closed on the 6th January, and opened on the 23rd March of the present year.

The following is a statement of the traffic through the canal during the year ended 30th June, 1889.

YEAR.	VESSELS.		TONNAGE.		TOLLS COLLECTED.	
	North.	South.	North.	South.	North.	South.
1888.	No.	No.	Tons.	Tons.	\$ cts.	\$ cts.
July.....	174	141	6,421	6,232	50 53	40 32
August.....	112	94	4,213	4,209	93 40	23 22
September.....	142	121	4,478	7,023	93 00	85 00
October.....	155	128	7,122	6,144	100 07	110 07
November.....	106	86	4,327	5,921	151 06	112 13
December.....	79	62	3,870	2,421	40 00	60 00
1889.						
March.....	6	4	204	287	6 00	4 00
April.....	120	99	5,432	3,510	100 00	58 00
May.....	171	130	11,101	8,428	247 41	200 40
June.....	138	149	7,826	6,112	234 51	213 22
Total.....	1,203	1,014	54,994	50,287	1,115 98	906 36

The lock and works in connection therewith are in good order, only requiring during the year ordinary care and attention.

The retaining wall—to the decayed state of which attention was called in my report of last year—was examined, the result being that though decayed in places it was not thought advisable to effect repairs at present, but to wait until a greater amount of decay had taken place, when a general and effectual repair would be made.

I have the honor to be, Sir,

Your obedient servant,

HENRY F. PERLEY,

Engineer in Charge.

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals.

APPENDIX No. 14.

ST. LAWRENCE NAVIGATION—TABLE OF DISTANCES—A.

FROM STRAITS OF BELLE-ILE TO PORT ARTHUR, AT HEAD OF LAKE SUPERIOR, BY WATER.

From	To	Sections of Navigation.	Statute Miles.	
			Inter-mediate	Total to Straits of Belle-Ile.
Straits of Belle-Ile.....	Cape Whittle.....	Gulf of St. Lawrence....	240	240
Cape Whittle.....	West Point, Anticosti.....	do	201	441
West Point, Anticosti.....	Father Point.....	River St. Lawrence.....	202	643
Father Point.....	Rimouski.....	do	6	649
Rimouski.....	Bic.....	do	12	661
Bic.....	Isle Verte.....	do	39	700
Isle Verte (opp. Saguenay).....	Quebec.....	do	126	826
Quebec.....	Three Rivers.....	do to Tide-water	74	900
Three Rivers.....	Montreal.....	do	86	986
Montreal.....	Lachine.....	Lachine Canal.....	8 $\frac{1}{2}$	994 $\frac{1}{2}$
Lachine.....	Beauharnois.....	Lake St. Louis.....	15 $\frac{1}{2}$	1,009 $\frac{3}{4}$
Beauharnois.....	Ste. Cécile.....	Beauharnois Canal.....	11 $\frac{1}{2}$	1,021
Ste. Cécile.....	Cornwall.....	Lake St. Louis.....	32 $\frac{3}{4}$	1,053 $\frac{3}{4}$
Cornwall.....	Dickinson's Landing.....	Cornwall Canal.....	11 $\frac{1}{2}$	1,065 $\frac{1}{4}$
Dickinson's Landing.....	Farran's Point.....	River St. Lawrence.....	5	1,070 $\frac{1}{4}$
Farran's Point.....	Upper end of Croyle's Island.....	Farran's Point.....	$\frac{3}{4}$	1,071
Upper end Croyle's Island.....	Williamsburg or Morrisburg.....	River St. Lawrence.....	10 $\frac{1}{2}$	1,081 $\frac{1}{2}$
Williamsburg.....	Rapide Plat.....	Rapide Plat Canal.....	4	1,085 $\frac{1}{2}$
Rapide Plat.....	Point Iroquois Village.....	River St. Lawrence.....	4 $\frac{1}{2}$	1,090
Point Iroquois Village.....	Upper end Presqu'Île.....	Point Iroquois Canal.....	3	1,093
Presqu'Île.....	Point Cardinal, Edwardsburg.....	Junction Canal.....	2 $\frac{5}{8}$	1,095 $\frac{5}{8}$
Point Cardinal.....	Head of Galops Rapids.....	Galops Canal.....	2	1,097 $\frac{5}{8}$
Galops Rapids.....	Prescott.....	River St. Lawrence.....	7 $\frac{3}{8}$	1,105
Prescott.....	Kingston.....	do	59	1,164
Kingston.....	Port Dalhousie.....	Lake Ontario.....	170	1,334
Port Dalhousie.....	Port Colborne.....	Welland Canal.....	26 $\frac{3}{4}$	1,360 $\frac{3}{4}$
Port Colborne.....	Amherstburg.....	Lake Erie.....	232	1,592 $\frac{3}{4}$
Amherstburg.....	Windsor.....	River Detroit.....	18	1,610 $\frac{3}{4}$
Windsor.....	Foot of St. Mary's Island.....	Lake St. Clair.....	25	1,635 $\frac{3}{4}$
Foot of St. Mary's Island.....	Sarnia.....	River St. Clair.....	33	1,668 $\frac{3}{4}$
Sarnia.....	Foot of St. Joseph's Island.....	Lake Huron.....	270	1,938 $\frac{3}{4}$
Foot of St. Joseph's Island.....	Foot of Sault Ste. Marie.....	River St. Mary.....	47	1,985 $\frac{3}{4}$
Sault Ste. Marie.....	Head of Sault Ste. Marie.....	Sault Ste. Marie Canal.....	1	1,986 $\frac{3}{4}$
Head of Sault Ste. Marie.....	Pointe aux Pins.....	River St. Mary.....	7	1,993 $\frac{3}{4}$
Pointe aux Pins.....	Port Arthur.....	Lake Superior.....	266	2,259 $\frac{3}{4}$
Port Arthur to Lake Shebandowan.....			45	
Lake Shebandowan to North-West Angle.....			312	
North-West Angle to Winnipeg.....			95	
Pointe aux Pins to Duluth.....			390	

Of the 2,259 $\frac{3}{4}$ miles from the Straits of Belle-Ile to the head of Lake Superior, 71 miles are artificial navigation, and 2,188 $\frac{3}{4}$ open navigation.

Straits of Belle-Ile to Liverpool, 1,942 geographical or 2,234 statute miles.

The total fall from Lake Superior to Tide-water is about 600 feet.

The steamboat voyage from Collingwood to Port Arthur is 532 miles.

APPENDIX No. 15.

TABLE of distances of Stations between the cities of Ottawa and Kingston.

No. of Station.	Name of Station.	Distances from Ottawa.	Locks.			Dams.			Length of Artificial Canal at each Station in miles.
			No.	Lift at Low Water.		No.	Length.	Height.	
		Miles.		Rise.	Ft. In.		Feet.	Feet.	
1	Ottawa.	0	8	82	0	3	$\left\{ \begin{array}{l} 230 \\ 1,320 \\ 1,616 \end{array} \right.$	$\left\{ \begin{array}{l} 13 \\ 33 \\ 14 \end{array} \right.$	4.00
2	Hartwell's	4 $\frac{1}{4}$	2	22	0	...	100	28	
3	Hogsback	5 $\frac{1}{2}$	2	13	6	1	320	60	
4	Black Rapids	9 $\frac{1}{2}$	1	10	0	1	300	12	0.13
5	Long Island	14 $\frac{3}{4}$	3	27	0	3	850	68	0.13
6	Burritt's	40 $\frac{1}{2}$	1	10	6	1	240	14	1.50
7	Nicholson	43 $\frac{3}{4}$	2	15	2	1	500	9	0.50
8	Clowes	44 $\frac{1}{2}$	1	10	0	1	481	16	0.05
9	Merrickville	46 $\frac{3}{4}$	3	25	0	1	150	6	0.33
10	Maitland	55	1	4	9	1	270	8	0.13
11	Edmunds	59 $\frac{1}{2}$	1	10	10	1	343	8	0.06
12	Old Slys	60 $\frac{1}{2}$	2	15	6	1	250	20	0.25
13	Smith's Falls	61 $\frac{1}{2}$	4	33	9	2	600	24	0.13
14	First Rapids or Poonamalie	64	1	7	9	1	260	5	1.25
15	Narrows	83 $\frac{1}{4}$	1	4	0	1	600	9	0.06
Total rise at low water				292	3				
				Fall.					
16	Isthmus	87 $\frac{1}{2}$	1	4	0	...			1.25
17	Chaffey's	92	1	12	6	...			0.13
18	Davis	94 $\frac{1}{2}$	1	9	0	1	300	15	0.06
19	Jones' Falls	97 $\frac{1}{4}$	4	60	0	1	300	60	0.25
20	Brewer's Upper Mills	108 $\frac{1}{4}$	2	19	0	1	200	20	1.75
21	do Lower Mills	110	1	14	2	1	200	12	4.25
22	Kingston Mills	120 $\frac{1}{4}$	4	46	8	1	6,042	14	0.25
23	Kingston	126 $\frac{1}{4}$							
Total fall at low water				165	4				
Total			47			24	15,472		16.46

APPENDIX No. 16.

TABLE showing the dates of the closing of the Canals in the Autumn of 1888 and of the opening in the Spring of 1889.

Canals.	Closing.	Opening
Lachine Canal	2nd December, 1888....	21st April, 1889.
Beauharnois Canal	1st December, 1888....	17th April, 1889.
Cornwall Canal	26th December, 1888....	22nd April, 1889.
Williamsburg Canal.....	10th December, 1888....	22nd April, 1889.
Welland Canal—		
New Canal	1st December, 1888....	{ 16th April, 1889. 1st May, 1889.
Old Canal		
St. Anne's Lock and Dam.....	22nd November, 1888....	19th May, 1889.
Carillon Canal	2nd December, 1888....	26th April, 1889.
Grenville Canal.....		
Culbute Lock and Dam.....		
Chute à Blondeau		
Rideau.. { Kingston Mills	23rd November, 1888....	29th April, 1889.
{ Ottawa.....	22nd November, 1888....	22nd April, 1889.
St. Ours Lock.....	24th November, 1888....	19th April, 1889.
Chambly Canal.....	22nd November, 1888....	29th April, 1889.
Erie Canal (New York).....	30th November, 1888....	1st May, 1889.
St. Peter's Canal (Cape Breton).....	6th January, 1889....	23rd March, 1889.
Trent Canal Works	22nd November, 1888....	17th April, 1889.

APPENDIX No. 17.

STATEMENT of Contracts entered into during the Fiscal Year ended 30th June, 1889.

SUBSIDIZED RAILWAYS.

No. of Contract.	Name of Contractor.	Date of Signature.	General Description.
8407	Montreal and Western Ry. Co.	June 6, 1888	Subsidy agreement, St. Jérôme to La Chute aux Iroquois.
8299	Lake Temiscamingue Colonization Ry. Co.	do 27, 1888	Subsidy agreement, Long Sault to Lake Kippewa; also to overcome the Rapids La Micharge, La Cave, La Erables and La Montagne; also wharves and landing stage.
9381	Ottawa and Gatineau Valley Ry. Co.	Aug. 19, 1889	Subsidy agreement, Hull towards Le Désert.
9537	Canada Atlantic Ry. Co.	Dec. 5, 1888	do Railway bridge at Côteau Landing.
9667	do do	July 12, 1889	do (supplemental), to operate railway bridge at Côteau Landing.
9550	Nova Scotia Central Ry. Co.	Oct. 15, 1888	Subsidy agreement, from a point 33½ miles from Lunenburg, in the District of New Germany, to Middleton on Windsor and Annapolis Railway.
9593	Quebec and Lake St. John Ry. Co.	Dec. 5, 1888	Subsidy agreement, Chambord Junction, near Lake St. John, towards Chicoutimi.
9660	Vaudreuil and Prescott Ry. Co.	Feb. 11, 1889	Subsidy agreement, Grand Trunk Railway, at Vaudreuil, towards Hawkesbury.
9666	Temiscouta Ry. Co.	Jan. 22, 1889	Subsidy agreement, Edmundston towards River St. François.
9838	Woodstock and Centreville Ry. Co.	May 6, 1889	Subsidy agreement, Upper Woodstock Station on New Brunswick Railway to or towards Centreville.
9839	Drummond County Ry. Co.	do 2, 1889	Subsidy agreement, from end of line covered by Contract No. 8,997, of 1st Dec., 1887, towards Nicolet.
9557	Medicine Hat Ry. and Coal Co.	Feb. 14, 1889	Subsidy agreement (in land), Medicine Hat to coal field in Townships 12 and 13, Range 6, West.

CAPE BRETON RAILWAY.

9613	J. W. McDonald.	Sept. 20, 1888	Build 5 miles, North Sydney Extension.
9614	McDonald Moffatt.	Oct. 30, 1888	do piling for foundations, Sydney River Bridge.
9669	do	Feb. 28, 1889	do wharf at Barrack Point.
9753	Sumner & Co.	1889	Supply cedar timber at Grand Narrows.
9754	W. Taylor.	Apr. 4, 1889	do Boisdale and George's River.
9755	J. P. Mowat.	Mar. 18, 1889	do Grand Narrows, Boisdale, George's River, Leitch's or Ball's Creek and Sydney
9756	J. Culligan.	do 7, 1889	do Sydney.
9757	E. A. McNeil.	1889	do Leitch's or Ball's Creek.
9758	J. Graham.	Mar. 13, 1889	Build gates for railway at Sydney and Grand Narrows.

STATEMENT of Contracts entered into during the Fiscal Year—*Continued.*CAPE BRETON RAILWAY—*Continued.*

No. of Contract.	Name of Contractor.	Date of Signature.	General Description.
9759	J. F. Teed.....	Mar. 26, 1889	Buildings, water tanks, &c., at Sydney and Grand Narrows.
9810	Western Union Tel. Co.....	1889	Telegraph line, Pt. Tupper to Leitch's Creek, thence to North Sydney and to Sydney.
9824	Reid & Isbester.....	Apr. 4, 1889	Build railway bridge at Grand Narrows.
9841	E. C. Cole.....	do 15, 1889	Supply railway ties at Newcastle.
9842	N. Poirier.....	do 17, 1889	do at Bonaventure River.
9843	Cyr & Colville.....	do 18, 1889	do between Caplin and Bonaventure Rivers.
9844	J. B. Henderson.....	do 22, 1889	do within 5 miles of Black Cape.
9845	W. Houston, jun.....	May 24, 1889	do between Little Cascapedia River and Caplin.
9846	J. Enright.....	do 3, 1889	do at Port Daniel Harbor.
9854	McDonald & Moffatt.....	Sept. 20, 1888	Prepare foundations for masonry of bridge abutments, freshwater creek, Sydney.
9882	H. A. Powell.....	May 1, 1889	Load and freight the railway ties, from points in Baie de Chaleurs and New Brunswick to the railway.
9889	J. P. Mowatt.....	Mar. 20, 1889	Additional quantity of cedar timber.
9890	C. P. Moffatt & Co.....	May 6, 1889	Fencing between Sydney River and Sydney.
9900	R. Keating.....	June 1, 1889	Transport rails, &c., Port Mulgrave to Grand Narrows.

OXFORD AND NEW GLASGOW RAILWAY.

9577	Rhodes, Curry & Co.....	Nov. 13, 1888	Construct buildings, stations, engine houses, &c.
9735	Dominion Bridge Co.....	Jan. 28, 1889	do superstructure for bridges and spans.
9784	A. McPherson & Co.....	Mar. 6, 1889	do do 6 spans.
9903	McDougall & Giles.....	July 6, 1889	Digging and lining wells.

PRINCE EDWARD ISLAND RAILWAY.

9896	S. Cunard & Co.....	June 14, 1889	Supply 6,200 tons coal for engines.
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INTERCOLONIAL RAILWAY.

9511	S. D. Oakes.....	Aug. 10, 1888	Water supplies on Eastern Extension and dam at Mulgrave, N.S.
9512	J. N. McElmon.....	do 10, 1888	Water supplies on Eastern Extension and dam at Piedmont and Antigonish.
9513	R. Maxwell.....	do 10, 1888	Water supplies on Eastern Extension and dam at Bayfield.
9531	J. Brown.....	do 28, 1888	Passenger station and freight shed at Gloucester Junction.
9532	McQueen, Grant & Maxwell...	do 10, 1888	Water tanks, Eastern Extension, at Piedmont, Antigonish, Bayfield and Mulgrave.
9633	Rhodes, Curry & Co.....	do 25, 1888	Freight shed, &c., at Spring Hill Junction.
9542	J. N. McElmon.....	Sept. 7, 1888	Works at Wharf No. 2, Richmond, N.S.
9543	J. A. Wheaton.....	do 8, 1888	Trench and water pipes at Hampton, N.B.
9572	Dussault & Beaulieu.....	Oct. 4, 1888	Repairs to Rimouski Wharf.
9581	Michaud & Plante.....	do 13, 1888	Alterations to Rivière du Loup station.
9586	Powers & Blouin.....	do 25, 1888	Snow fence, St. Charles Branch.

[1889]

STATEMENT of Contracts entered into during the Fiscal Year—*Continued.*INTERCOLONIAL RAILWAY—*Concluded.*

No. of Contract.	Name of Contractor.	Date of Signature.	General Description.
9587	Moncton Gas Light and Water Co.	do 31, 1888	Supply water, 10 years, Moncton.
9596	C. C. Dugan.	Nov. 13, 1888	Loading sugar at Richmond, N.S.
9599	J. N. McElmon.	do 8, 1888	Filling between wharves at Mulgrave, Eastern Extension.
9599	J. Mulligan.	do 8, 1888	Finish station and freight room at Nash's Creek.
9603	J. Harris & Co.	Nov. 19, 1888	Construct 2 Russell snow ploughs.
9604	J. Crossen.	do 20, 1888	do 100 box cars.
9605	do	do 20, 1888	do 70 platform cars.
9608	E. Dion.	do 8, 1888	do a station and freight room at Millstream.
9612	J. Harris & Co.	do 27, 1888	do 50 platform cars.
9615	do	do 28, 1888	do 120 box cars.
9623	Jas. Brown.	Oct. 23, 1888	do a freight shed, &c., on lumber wharf at Richmond, N.S.
9630	Town of New Glasgow.	June 19, 1889	Supply water, 10 years, at New Glasgow and Stellarton.
9642	J. Crossen.	Dec. 24, 1888	Build 8 conductors' vans.
9793	J. A. Jones.	Feb. 25, 1889	do an old rail overhead bridge at Tetagouche, near Bathurst, N.B.
9807	Ontario Car Co.	Oct. 10, 1887	do 100 coal cars.
9814	Ross Bros.	March 5, 1889	Furnish 100 standard switch signal frames.
9816	Barrow Hematite Steel Co. (Lim)	do 5, 1889	do 2,300 tons steel rails at Annapolis.
9822	C. Cammell & Co.	do 12, 1889	do 300 do Halifax.
9848	Barrow Hematite Steel Co. (Lim)	do 26, 1889	do 7,000 do St. John.
9860	J. Harris & Co.	April 10, 1889	Build 6 1st class passenger cars.
9867	J. Crossen.	May 2, 1889	do 4 baggage cars.
9916	St. John Bolt and Nut Co.	June 10, 1889	Supply 50 tons fishplate bolts and nuts.
9920	Rhodes, Curry & Co.	July 9, 1889	Build a round house and shop, to erect locomotives, at Moncton.
9922	Nova Scotia Steel and Forge Co. (Limited)	June 22, 1889	Supply 460 tons angle fishplates.
9924	F. B. Atkinson	July 18, 1889	Build freight shed and remove station at St. André, P.Q.
9925	C. J. McKinnon.	do 23, 1889	Lay a water pipe at Stellarton.
9927	W. Castel.	do 8, 1888	Loading sugar at Richmond and Deep Water Terminal, Halifax.
9934	R. R. Call.	do 30, 1889	Build coal shed and trestle at Moncton, N.B.
9935	Rhodes, Curry & Co.	do 30, 1889	do stone ash pit at Moncton, N.B.
9943	Forbes Manufacturing Co.	do 22, 1889	Floor system, &c., Sackville Bridge.
9945	Ontario Car Co.	April 22, 1889	Construct 31 platform cars.
9946	do	do 22, 1889	do 25 box cars.

ANNAPOLIS AND DIGBY RAILWAY.

9816	Barrow Hematite Steel Co. (Lim)	March 15, 1889	Supply 2,300 tons steel rails at Annapolis, N.S.
9857	O'Neill & Campbell	May 13, 1889	Construct 20 miles of railway.
9917	St. John Bolt and Nut Co.	June 10, 1889	Supply 20 tons fishplate bolts and nuts.

WELLAND CANAL.

Let's			
120567	John Battle.	July 20, 1888	Supply and deliver Thorold hydraulic cement for repairs to Port Dalhousie Piers.
120922		Aug. 20, 1888	
9851	McCleary & McLean.	April 23, 1889	Supply timber for repairs to pier at Port Colborne.
9852	W. Hutchinson.	do 22, 1889	do do Port Maitland.

STATEMENT of Contracts entered into during the Fiscal Year—*Concluded.*

TAY CANAL.

No. of Contract.	Name of Contractor.	Date of Signature.	General Description.
Letter 122242	Wm. Davis & Sons.....	Nov. 12, 1888	Extension of basin in town of Perth.

CORNWALL CANAL.

9558	Wm. Davis & Sons.....	Nov. 5, 1888	Section 2, canal enlargement.
9560	do	do 5, 1888	do 3 do
9562	do	do 5, 1888	do 4 do
9564	Gilbert Blasting and Dredging Co. (Limited)	do 2, 1888	do 5 do
9566	do do ..	do 2, 1888	do 6 do
9568	do do ..	do 2, 1888	do 7 do
9570	do do ..	do 2, 1888	do 8 do
9783	J. D. Silcox.....	March 1, 1889	Strengthen south bank af canal, broken Oct. 11, 1888.

WILLIAMSBURGH CANAL.

9591	Murray & Cleveland	Nov. 14, 1888	Enlarge Galops Division, locks, &c.
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SAULT STE. MARIE CANAL.

9594	Hugh Ryan & Co.....	Nov. 30, 1888	Form the canal, lift lock, &c.
9643	do	Jan. 30, 1889	Form and deepen lower entrance to canal.
9645	Allan & Fleming.....	March 26, 1889	do upper do

H. A. FISSIAULT.

OTRAWA, 25th October, 1889.

APPENDIX

GENERAL STATE

1st. Water Power and other Public Property leased on Canals

Date of Signature.	Term of Lease.	Lessees.	Property Leased.	For what purpose used.
<i>Intercolonial Railway.</i>				
Aug. 14, '89	When done with or when called for.	Gray, McManus, Trites & Co.	Use of locomotive engine No. 69, delivered at Brown's Point.	For ballasting on Oxford & New Glasgow Ry.
May 16, '89	do ..	do ..	Use of 2 locomotive engines and 24 platform cars.	do ..
June 4, '89	do ..	do ..	Use of 1 locomotive engine and 6 platform cars.	do ..
July 1, '89	1 year.....	Jos. Fortin.....	License to sell books on trains between Point Lévis and Campbellton.	.....
do 1, '89	do	Canada Rail'way News Co.	License to sell books on trains between Halifax and Campbellton.	.....
June 6, '89	When done with or when called for.	McDonald & O'Brien	Use of 1 locomotive and 12 platform cars.	Track laying, &c., Oxford & N. G. Ry.
<i>Cape Breton Railway.</i>				
April 2, '89	Pleasure of the Government.	Neil McNeil....	Part lot 165, Long Island, Barrachois, Cape Breton County.	Yard.....
<i>Beauharnois Canal.</i>				
July 4, '89	1 month	John R. Booth.....	Use of Government dredge No. 2, now at Valleyfield.	Côteau Bridge..
do 25, '89	Pleasure of the Government.	Jas. T. Anderson....	Lot 846, Valleyfield, on Grande Isle.	Foundry.....
<i>Cornwall Canal.</i>				
June 27, '89	do ..	Toronto Paper Manufacturing Co.	To lay a water pipe under canal, near lock 18, to river.	Water pipe.....
<i>Lachine Canal.</i>				
July 12, '88	do ..	Wm. Davis & Sons..	Lot above new upper lock at Lachine.	Storing plant and tools.
Jan. 19, '89	do ..	H. Bulmer & Bro....	Lots 10 and 11, west of St. Gabriel Basin No. 3, Montreal.	Storing lumber..
Aug. 15, '88	1 year.....	J. R. Walker.....	Space in shed No. 1, St. Gabriel Basin No. 3, Montreal.	Storing chalk in bulk.
do 30, '88	Pleasure of the Government.	R. McCrory	Lot 21, west of St. Gabriel Basin No. 2, Montreal.	Storing coal.....
Oct. 17, '88	do ..	Albert Fox.....	Lay 2-inch pipe from canal to boiler, lot 3,682, Côte St. Paul.	Glue factory....
Dec. 19, '88	1 year.....	Dobell, Beckett & Co.	Space in shed No. 1, St. Gabriel, Montreal.	Storing lumber..
Dec. 19, '88	do	do ..	do 2 do ..	do ..
May 8, '89	4 months	Lalonde & Levesque.	do 1 do ..	Skating rink....
do 8, '89	Winter, 1889.	P. Lamothe.....	Build vessels on canal grounds.....	Build vessels....

No. 18.

MENT SHOWING

and Railways, during the Fiscal Year ended 30th June, 1889.

Amount of Water Power Leased.	Area of Property Leased.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			Remarks.
				Amount of each instalment.	When Due each Year.	When first instalment was Due.	
			\$ cts.	\$ cts.			
			Per day.				
		From date of delivery to return.	10 00		Monthly..		
		do ..	Per day.		do ..		
		do ..	Eng. \$10 cars 50c		do ..		
		do ..	do ..		do ..		
		July 1, '89	400 00	33 34	do ..	July 1, '89..	In advance.
		do 1, '89	1,418 96	118 25	do ..	do 1, '89..	do
		From deliv. to date of return.	Per day. Eng. \$10 cars 50c each.		do ..		
	1,700 ft...	Feb. 1, '89	1 00		Feb. 1...	Feb. 1, '89..	
			Per day.				
		Delivery to return.	10 00				Pays all expenses.
	233 x 200 x 130 ft.	July 1, '89	40 00	40 00	July 1...	On delivery of lease.	In advance.
		April 1, '89	5 00	5 00	April 1...	do ..	do
	20,972 ft..	May 1, '88	20 00	20 00	May 1...	do ..	do
	23,214 ft..	do 1, '88	362 72	362 72	do 1...	do ..	
	25 x 40 ft..	July 14, '88	50 00	50 00	do 1...	do ..	do
	14,912 ft..	May 1, '88	174 40	174 40	do 1...	do ..	
		Nov. 1, '88	10 00	10 00	Nov. 1...	do ..	do
	650 x 40 ft.	May 1, '88	600 00	50 00	Monthly..	do ..	do
	500 x 40 ft.	June 1, '88	600 00	50 00	do ..	do ..	do
		Dec. 1, '88 to Apl. 1, '89	10 00	10 00		do ..	do
		Winter, '89	30 00	30 00		do ..	do

GENERAL STATEMENT showing: 1st. Water Power and other

Date of Signature.	Term of Lease.	Lessees.	Property Leased.	For what purpose used.
			<i>Rideau Canal.</i>	
Aug. 11, '88	Pleasure of the Government.	Ottawa Canoe Club..	Water lot, near Sterling's Wharf, Ot- tawa.	Boat house.....
Sept. 3, '88	do ..	J. R. Booth	Lot 40, 1st Concession, Ottawa Front, Nepean, near Dow's Swamp.	Lumber yard and track.
do 28, '88	do ..	Wm. Anglin.....	Lot 25, 8th Concession, Pittsburg, at Brewer's Upper Mills.	Grist mill.....
'88	do ..	Corporation City of Ottawa.	Lay main sewer along and across canal at Ottawa.	Sewerage.....
Feb. 26, '89	do ..	Denis Bergin.....	Part lot N. $\frac{1}{2}$ 6, in 2nd Concession, Nepean, on Nichol's Island.	Farming, &c....
April 11, '89	do ..	Josiah Payne.....	Part lot 9, Concession A, Wolford, at Merrickville.	To shorten his fence.
do 17, '89	do ..	W. H. Whealey.....	Part lot No. 1, in 5th Concession, N. Crosby, at Newboro'.	Brickyard.....
			<i>Welland Canal.</i>	
Aug. 20, '88	do ..	Corporation Town of Welland.	Surplus water from raceway, to drive pump; surplus water from canal, to supply water.	Domestic and fire purposes.
Nov. 17, '88	do ..	Henry Jarvis.....	Sub-lots 3 and 4 of lot 15, 4th Conces- sion, Grantham, St. Catharines.	Sail loft... ..

Public Property leased on Canals and Railways, &c.—*Concluded.*

Amount of Water Power Leased.	Area of Property Leased.	Date from which Lease is reckoned.	Annual Rental.	Terms of Payment.			Remarks.
				Amount of each instalment.	When Due each Year.	When first instalment was Due.	
			\$ cts.	\$ cts.			
.....	0·10 acre.	July 1, '88	1 00	1 00	July 1...	On delivery of lease.	In advance.
.....	5·25 acres	Sept. 1, '88	25 00	25 00	Sept. 1...	do ..	do
10 h. p..	43·00 do	Jan. 1, '88	76 00	76 00	Jan. 1...	do ..	do
.....		Date of lease	1 00	1 00	Dec. 1...	do ..	do (not signed yet.)
.....	10·00 acres	Jan. 1, '89	7 50	7 50	Jan. 1...	do ..	do
.....	5,269 ft...	April 1, '89	1 00	1 00	April 1...	do ..	do
.....	400 × 200 ft	Sept. 1, '87	10 00	10 00	Sept. 1...	do ..	do
10 h. p..	.....	88	80 00	40 00	Jan. 1 and July 1.	do ..	do no rent first year ; \$8 per h. p. for fire.
.....	0·23 acre..	July 1, '88	10 00	10 00	July 1....	do ..	do

134 2nd. Property purchased or damaged, and property sold by the Department of Railways and Canals as not being required for the Railways or Canals of the Dominion, during the Fiscal Year ended 30th June, 1889.

Date of Signature.	Vendors.	Purchasers.	PROPERTY PURCHASED, SOLD OR DAMAGED.			For what Purpose.	Area of Land.	Amount Paid.	Remarks.
			Cape Breton Railway.						
			Lots.	District.	County.				
Nov. 26, 1888	Government	E. T. Moseley.	256	Sydney.	Cape Breton	Private.	Acres. 0.72	\$ cts.	Arbitration costs, and to release. Letters patent of land taken, and left afterwards, line being changed.
Oct. 20, 1888	E. T. Moseley	Her Majesty.	256	do	do	Cape Breton Ry	0.72	440 90	Release of all claims, for land taken, and left afterwards, line being changed.
Apr. 25, 1888	H. Campbell <i>et ux.</i>	do	168	Grand Narrows.	Victoria	do	3.24	12 96	
Nov. 12, 1887	D. Gillis <i>et ux.</i>	do	154	do	do	do	1.09	7 60	
do 12, 1887	Jas. Campbell <i>et ux.</i>	do	169	Jamesville.	do	do	3.15	12 60	
do 12, 1887	do	do	165	do	do	do	2.06	10 40	
Apr. 25, 1888	Neil Gillis.	do	164	do	do	do	4.09	15 75	
Jan. 23, 1888	Jas. Campbell <i>et al.</i>	do	163	do	do	do	7.18	64 62	
do 23, 1888	Frs. McKinnon	do	157	McKinnon's Harbour.	do	do	1.20	72 00	
Apr. 25, 1888	Jas. McKinnon <i>et al.</i>	do	158	McKinnon's Intervale.	do	do	2.09	146 30	
do 25, 1888	Don. McNeil <i>et al.</i>	do	151	McKinnon's Harbour.	do	do	1.66	41 50	
do 25, 1888	Frs. McKinnon	do	152	McKinnon's Intervale.	do	do	1.48	17 76	
Aug. 20, 1888	Neil Campbell.	do	173½	Grand Narrows.	do	do	3.74	18 70	
May 9, 1888	C. J. Campbell.	do	167	do	do	do	1.34	8 04	
July 3, 1888	J. S. McNeil	do	182	do	do	do	1.01	600 00	
do 28, 1888	C. R. Hart	do	179	do	do	do	2.49	125 00	
Apr. 24, 1888	J. McNeil.	do	178	do	do	do	1.03	15 45	
do 24, 1888	H. McNeil	do	176	do	do	do	1.89	30 24	
do 24, 1888	M. McNeil	do	171	do	do	do	17.55	222 90	
do 24, 1888	Isabella McNeil.	do	171	do	do	do	2.08	20 80	
Aug. 20, 1888	M. McNeil	do	173	do	do	do	3.71	37 10	
Apr. 24, 1888	James McNeil	do	172	do	do	do	3.03	30 30	
do 24, 1888	M. McNeil	do	169½	do	do	do	2.61	26 10	
do 25, 1888	Anne Campbell.	do	170½	Jamesville.	do	do	1.18	11 80	
Jan. 23, 1888	Neil McNeil	do	166	do	do	do	1.36	150 00	
Apr. 25, 1888	J. A. McDonald	do	161	do	do	do	1.82	18 20	
do 26, 1888	John McDonald	do	140	do	do	do	0.39	4 20	
do 25, 1888	D. McDonald	do	139	do	do	do	0.53	5 20	
do 26, 1888	do	do	137	do	do	do	2.81	28 10	
do 25, 1888	Alex. McNeil	do	137	do	do	do	4.78	57 36	

do 26, 1888	Don. Kennedy	do	131	Little Crossing	do	5 35	32 10
Nov. 21, 1887	M. McDonald	do	128	do	do	0 97	5 82
Jan. 21, 1888	Chas. McDonald	do	130	do	do	1 13	13 56
Nov. 12, 1887	Chas. Campbell	do	132	McKinnon's Harbour	do	9 53	52 42
Apr. 25, 1888	Neil McNeil	do	136	do	do	5 44	27 20
Jan. 21, 1888	Jno. McDonald	do	138	do	do	6 99	55 92
Nov. 12, 1887	J. A. McNeil	do	144	do	do	2 04	28 80
Jan. 21, 1888	A. McLean	do	142, 145	do	do	1 75	14 00
Nov. 12, 1887	Augus McDonald	do	148	do	do	2 17	15 19
Apr. 25, 1888	Jno. McLean	do	143	do	do	2 61	23 49
do 25, 1888	H. McLean	do	147	do	do	3 57	28 56
do 25, 1888	Don. Walker	do	147 ^a	do	do	2 54	58 42
do 25, 1888	Jessie McNeil	do	147 ^b	do	do	1 73	20 76
do 25, 1888	Rodk. McNeil	do	146	do	do	6 51	78 12
Jan. 21, 1888	Rodk. McLean	do	149	do	do	2 36	14 16
Apr. 26, 1888	Rodk. McLeod	do	127	Little Crossing	do	1 12	6 72
do 26, 1888	Sarah McDonald	do	129	do	do	0 94	11 28
Aug. 20, 1888	Christina McLean	do	150	McKinnon's Harbour	do	1 06	32 00
Dec. 22, 1888	R. C. Campbell	do	162	Grand Narrows	do	1 63	6 52
do 22, 1888	Don. McNeil	do	.....	do	do	3 14	18 84
do 22, 1888	M. Melnis <i>et al.</i>	do	.....	do	do	5 05	40 30
Nov. 26, 1888	W. H. McKenzie, (trustee)	do	27	Head of Port Hawkesbury	do	4 60	36 54
Oct. 11, 1888	Marg. A. Cowan <i>et al.</i>	do	34	Little River	do	0 83	6 78
Nov. 14, 1888	Jas. McDonald	do	3, 6, 7, 10, 11	Guernsey	do	1 16	500 00
Sept. 26, 1888	Eleanor McDonald	do	36	Little River Coal Mines	do	15 60	121 32
June 6, 1889	Lord High Admiral	do	258, 258 ^a	Fresh Water Creek	Sydney	0 64 & 0 34	1 00
Feb. 24, 1888	A. McIntyre	do	81 ^a	River Dennis	Inverness	4 67	28 02
Feb. 24, 1888	Margt. McKinnon and Flora Matheson	do	126	Little Crossing	do	24 35	146 10
Jan. 27, 1888	D. McMillan	do	107 ^a	Orangedale	do	3 46	41 52
Jan. 27, 1888	John Campbell	do	125	Little Crossing	do	4 31	27 95
do 26, 1888	P. McLellan	do	124	Gillis Cove	do	7 33	43 98
do 27, 1888	John McLean	do	122	do	do	1 83	27 45
do 27, 1888	Alex. McLellan	do	123	do	do	4 61	36 88
Feb. 23, 1888	L. Gillis	do	121	do	do	1 88	18 80
Jan. 27, 1888	Angus Gillis	do	120	do	do	2 28	43 20
Dec. 18, 1888	Neil Gillis (turner)	do	119	do	do	1 01	25 00
Feb. 23, 1888	Wm. McIver	do	118 ^a	do	do	3 23	24 22
Dec. 18, 1888	Neil Gillis (turner)	do	117	do	do	1 41	25 00
Jan. 27, 1888	Arch'd. Gillis	do	116	do	do	4 84	33 88
Feb. 24, 1888	N. McLean	do	115	Marysleale	do	4 67	28 02
Jan. 26, 1888	Cath. McLeod	do	114	do	do	2 28	11 40
do 26, 1888	Don. Martin	do	113	do	do	8 72	87 20
do 26, 1888	M. McLeod	do	110	do	do	3 37	50 55
Feb. 23, 1888	D. McMillan	do	107	do	do	13 52	67 60
Mar. 14, 1888	N. McKinnon	do	106 ^a	do	do	5 31	24 10
Jan. 16, 1888	do	do	106	do	do	5 31	58 41
Mar. 14, 1888	J. & C. A. Munro	do	105 ^{3/4}	Seal Cove	do	5 19	36 33

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2ND. PROPERTY purchased, damaged, or sold by the Department of Railways and Canals, &c.—Continued.

Date of Signature.	Vendors.	Purchasers.	PROPERTY PURCHASED, SOLD OR DAMAGED.			For what Purpose.	Area of Land.	Amount Paid.	Remarks.
			Cape Breton Railway—Continued.						
			Lots.	District.	County.				
do 14, 1888	Angus Munro.....	Her Majesty.	105½	Seal Cove	Inverness ..	Cape Breton Ry...	Acres.	\$ cts.	
Feb. 24, 1888	B. McLean.....	do	104a	do	do	do	5 19	36 33	
Mar. 14, 1888	J. & C. McLean	do	103a	do	do	do	1 51	13 50	Wood and timber.
Jan. 26, 1888	John McLean.....	do	103	do	do	do	2 26	25 00	
do 26, 1888	H. McLean.....	do	102	do	do	do	1 47	33 90	
do 26, 1888	N. McLean.....	do	101	do	do	do	3 79	22 05	
do 26, 1888	Don. McLean.....	do	99	Lower River Dennis ..	do	do	8 43	30 32	
do 26, 1888	Murdock McLean....	do	98	Seal Cove.....	do	do	50 58	50 58	
do 24, 1888	Cowan D. McLean....	do	96	River Dennis.....	do	do	3 00	15 00	
do 24, 1888	D. Pringle.....	do	95a	do	do	do	4 42	26 22	
do 24, 1888	Jas. Pringle.....	do	95	do	do	do	1 73	10 38	
do 24, 1888	D. Blue.....	do	94	do	do	do	1 73	10 38	
do 24, 1888	A. Cummings.....	do	93	do	do	do	4 68	46 80	
do 24, 1888	B. Smith.....	do	92	do	do	do	1 76	17 60	
do 24, 1888	John Cummings.....	do	90a	do	do	do	1 56	14 04	
Feb. 27, 1889	A. McFadden.....	do	89	do	do	do	1 73	12 11	
do 27, 1889	L. McFadyen.....	do	88	do	do	do	1 51	9 06	
Jan. 24, 1888	M. McKenzie.....	do	87	do	do	do	3 15	18 90	
Feb. 25, 1888	A. McLennan.....	do	86	do	do	do	3 86	38 60	
July 13, 1888	J. & J. Cummings.....	do	85a	do	do	do	2 83	177 78	
Jan. 24, 1888	Rod. Cummings.....	do	84	do	do	do	5 50	44 00	
Feb. 25, 1888	P. McIntyre.....	do	83b	(Big Brook)	do	do	5 30	74 34	
Dec. 17, 1888	H. McLean.....	do	83a	do	do	do	7 04	105 60	
Jan. 24, 1888	do	do	83	do	do	do	7 61	114 90	
Feb. 25, 1888	D. McLean.....	do	82a	do	do	do	11 81	94 48	
Jan. 23, 1888	do	do	82	do	do	do	2 02	40 40	
Feb. 24, 1884	H. McIntyre.....	do	81	do	do	do	4 23	84 60	
Jan. 23, 1888	John McIntyre.....	do	80	do	do	do	8 67	52 02	
Aug. 18, 1888	S. McLean <i>et al.</i>	do	79a	do	do	do	3 50	24 57	
Jan. 23, 1888	D. McLean.....	do	78	do	do	do	2 00	12 00	
Feb. 25, 1888	D. McLeod.....	do	77	Big Brook.....	do	do	16 60	116 27	
Jan. 23, 1888	R. McLeod.....	do	76	do	do	do	4 65	27 90	
do 23, 1888	M. & D. McLeod....	do	74	do	do	do	2 51	15 06	
do 23, 1888	Arch. McLean.....	do	73	do	do	do	5 50	33 06	
do 23, 1888	Grace McArthur....	do	72	do	do	do	6 83	40 90	More or less area.
Mar. 16, 1888	A. McArthur <i>et al.</i> ...	do	70	do	do	do	5 00	30 00	
							7 79	46 74	

2ND. PROPERTY PURCHASED, DAMAGED, OR SOLD BY THE DEPARTMENT OF RAILWAYS AND CANALS, &c.—Continued.

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Date of Signature.	Vendors.	Purchasers.	Property purchased, sold or damaged.		For what Purpose.	Area of Land.	Amount Paid.	Remarks.
			Cape Breton Railway.—Continued.					
			Lots.	District.					County.
			Cornwall Canal.					
Nov. 3, 1888	J. Osborne.....	Her Majesty..	18	1st Con. Cornwall.....	Stormont....			
do 9, 1888	J. N. Ault.....	do	22, 23	do	do	5 00	150 00	
d 29, 1888	J. Pescod.....	do	17	do	do	20 50	1,950 00	
Dec. 4, 1888	D. Pescod.....	do	17	do	do	3 12	97 50	
do 10, 1888	G. Pescod.....	do	17	do	do	2 64	79 20	
do 11, 1888	J. Blackadder.....	do	20, 21	do	do	5 28	158 32	
Jan. 16, 1889	W. J. & H. Wood.....	do	W ¹ / ₂ 13	do	do	10 00	2,000 00	
do 23, 1889	G. E. Robertson.....	do	21, 22, 23	do	do	6 60	956 00	
do 28, 1888	W. J. Wood.....	do	E ¹ / ₂ 13	do	do	38 39	2,282 25	
do 1, 1889	A. Serviss.....	do	E ¹ / ₂ 6	1st Con. Osnabruk....	do	10 50	1,544 00	
do 2, 1889	Wm. Brown.....	do	W ¹ / ₂ 6	do	do	.....	92 24	Principal and interest
do 1, 1889	T. Shields.....	do	W ¹ / ₂ 5	do	do	.....	89 98	do
do 1, 1889	F. Clark.....	do	W ¹ / ₂ 5	do	do	.....	52 55	do
do 1, 1889	E. Ryan.....	do	E ¹ / ₂ 5	do	do	.....	53 27	do
do 16, 1889	C. Winters.....	do	E ¹ / ₂ 4	do	do	.....	173 34	do
do 4, 1889	W. Serviss.....	do	W ¹ / ₂ 4	do	do	.....	36 21	do
Mar. 4, 1889	J. A. Hill.....	do	18	1st Con. Cornwall.....	do	.....	98 96	do
do 18, 1889	W. C. Serviss.....	do	N ¹ / ₂ 4	1st Con. Osnabruk....	do	540 feet.	160 20	
do 16, 1889	E. Ryan.....	do	E ¹ / ₂ 5	do	do	Acres.		
do 18, 1889	T. Shields.....	do	W ¹ / ₂ 5	do	do	1 76	365 00	
do 20, 1889	J. A. Shearer.....	do	18	1st Con. Cornwall.....	do	2 67	747 50	
Apr. 18, 1889	F. Clark.....	do	W ¹ / ₂ 5	1st Con. Osnabruk....	do	0 67	533 00	
May 1, 1889	S. Moss.....	do	E ¹ / ₂ 29	1st Con. Cornwall.....	do	0 68	5 00	Release, as tenant.
May 14, 1889	G. A. Moss.....	do	E ¹ / ₂ & W ¹ / ₂ 3	1st Con. Osnabruk....	do	0 89	255 00	
					do	2 78	700 00	
					do	0 14	1,157 81	
			Chamblly Canal.					
Jan. 25, 1889	Joseph Remy.....	Her Majesty..		Cadastral lot 130, Parish St. Charles and No. 1 St. Hilaire, 1st Con., Rouville.....	Chamblly Canal....	25 × 25 feet	50 00	
July 30, 1889	Eduard Marcoux....	do		Receit in full for dismissal as keeper of Langeher Bridge, at St. John's, P. Q.....	do	.....	150 00	

Nov. 30, 1888	Dept. of Railways and Canals.	Dept. of Interior.	<i>Carillon Canal and Dam.</i>		For a road, Carillon dam, staunching.	
			Lot part 9, 1st Con., Chatham, near feeder, damages.	Lot part 9, 1st Con., Chatham, damages.		
do 26, 1888	P. Filon.	Her Majesty	Lot part 9, 1st Con., Chatham, near feeder, damages.	Lot part 9, 1st Con., Chatham, damages.	do	50 00
Dec. 27, 1888	E. Coad	do	Lot E. $\frac{1}{2}$ 7, 1st Con., East Hawkesbury, damages	Lot E. $\frac{1}{2}$ 7, 1st Con., East Hawkesbury, damages	do	40 00
do 27, 1888	J. Gibson	do	Lot E. $\frac{1}{2}$ 11, 1st Con.	Lot E. $\frac{1}{2}$ 11, 1st Con.	do	250 00
do 27, 1888	J. Hodgson	do	Lot W. pt. 11, 1st Con.	Lot W. pt. 11, 1st Con.	do	25 00
do 27, 1888	S. Cole	do	Lot W. of W. pt. 11, 1st Con.	Lot W. of W. pt. 11, 1st Con.	do	50 00
do 27, 1888	W. Cole <i>et al.</i>	do	Lot E. $\frac{1}{2}$ 12, 1st Con.	Lot E. $\frac{1}{2}$ 12, 1st Con.	do	130 00
do 27, 1888	E. S. Bradford, <i>et ux.</i>	do	Lot E. $\frac{1}{2}$ 13, 1st Con.	Lot E. $\frac{1}{2}$ 13, 1st Con.	do	200 00
do 27, 1888	W. R. Bradford <i>et al.</i>	do	Lot E. $\frac{1}{2}$ 14, 1st Con.	Lot E. $\frac{1}{2}$ 14, 1st Con.	do	125 00
do 27, 1888	Ellen (Pitcairn) McPhaden	do	Lot E. pt. 5, 1st Con.	Lot E. pt. 5, 1st Con.	do	50 00
do 27, 1888	H. Mackinnon.	do	Lot pt. 4, 1st Con.	Lot pt. 4, 1st Con.	do	37 40
Jan. 10, 1889	A. & H. Hartley <i>et al.</i>	do	Lot W. $\frac{1}{2}$ 8, 1st Con.	Lot W. $\frac{1}{2}$ 8, 1st Con.	do	40 00
Feb. 9, 1889	Alex. St. Denis.	do	Lot 2, 1st Con.	Lot 2, 1st Con.	do	200 00
Jan. 16, 1889	T. Miller.	do	Lot N. E. $\frac{1}{4}$ 4, 8th Con.	Lot N. E. $\frac{1}{4}$ 4, 8th Con.	do	25 00
Jan. 27, 1888	A. Lamb <i>et al.</i>	do	Lot W. $\frac{1}{2}$ 5, 1st Con.	Lot W. $\frac{1}{2}$ 5, 1st Con.	do	40 00
Dec. 27, 1889	E. Barron.	do	Lot 200, 1st Con., Chatham, damages.	Lot 200, 1st Con., Chatham, damages.	do	150 00
Dec. 29, 1888	H. Stephens.	do	Grande Isle or Struthers Island, 1st Con., East Hawkesbury, damages	Grande Isle or Struthers Island, 1st Con., East Hawkesbury, damages	do	300 00
Mar. 25, 1889	Executor of late Wm. Gray	do	Lot W. $\frac{1}{2}$ 12, 1st Con., E. Hawkesbury, damages	Lot W. $\frac{1}{2}$ 12, 1st Con., E. Hawkesbury, damages	do	100 00
Apr. 15, 1889	J. Larocque	do	Lot E. $\frac{1}{2}$ 8, 1st Con.	Lot E. $\frac{1}{2}$ 8, 1st Con.	do	40 00
do 27, 1889	T. Ross <i>et al.</i>	do	Lot 125, 1st Con.	Lot 125, 1st Con.	do	225 50
<i>Intercolonial Railway.</i>						
Sep. 15, 1888	J. N. Pouliot	do	Lot 60, Ste. Anne, Pointe au Père, damages.	Lot 60, Ste. Anne, Pointe au Père, damages.	St. Charles Branch	2,070 00
Jan. 30, 1889	Wm. Vennier	do	Lot 471, Lauzon ward, Town of Lévis.	Lot 471, Lauzon ward, Town of Lévis.	do	5,000 00
Feb. 26, 1889	Corporation de Lauzon	do	Lot 273, Lauzon Village, Lévis County	Lot 273, Lauzon Village, Lévis County	do	1,291 94
Apr. 26, 1889	Théofrède Hamel	do	Lots 426, 424 do	Lots 426, 424 do	do	18,000 00
June 12, 1889	do	do	Lot 423 do	Lot 423 do	do	4,000 00
<i>Lachine Canal.</i>						
May 6, 1889	Hochelaga Bank.	do	Receipt. Land at Côte St. Paul, damages.	Receipt. Land at Côte St. Paul, damages.	Lachine Canal.	4,924 86
<i>Murray Canal.</i>						
Nov. 1, 1888	J. McCrudden.	do	House on Lot N.W. $\frac{1}{4}$ 8, carrying place block, township of Murray.	House on Lot N.W. $\frac{1}{4}$ 8, carrying place block, township of Murray.	Bridgekeeper's house	300 00

Release for damages.

Estate Hubert.

Built by him.

2nd. PROPERTY purchased, damaged, or sold by the Department of Railways and Canals, &c.—*Continued.*

Date of Signature.	Vendors.	Purchaser.	Property Purchased, Damaged or Sold.	For what Purpose.	Area of Land.	Amount Paid.	Remarks.
			<i>Ottawa River, damages by Dams at Rocher Fendu and Grand Calumet Falls.</i>		Acres.	\$ cts.	
Nov. 5, 1888	Peter Comrie	Her Majesty.	Lot 23, B, East front Westmeath.	Culbute Works.	.....	60 00	
July 28, 1888	Geo. Carswell	do	Lot 32, 8th Con., Grand Calumet.	do	.....	150 00	
Oct. 12, 1888	Jas. Colton	do	Lot 20, 2nd Con., Litchfield.	do	.....	125 00	
do 13, 1888	M. Kavanagh	do	Lot 16, 6th Con. do	do	.....	100 00	
Nov. 3, 1888	C. Dumouchel <i>et al.</i>	do	Lot 27, 8th Con., Grand Calumet	do	.....	85 00	
do 19, 1888	Widow L. Lacourse	do	Lot 12, 1st Con. do	do	.....	260 00	
do 21, 1888	Hon. J. Bryson, Sen.	do	Lots 19, 20, 21, 2nd Con., Mansfield.	do	.....	500 00	
do 22, 1888	T. M. Carswell	do	Lot 11, A, Mansfield.	do	.....	125 00	
Dec. 3, 1888	Widow Wm. Flynn	do	Lot S.E. $\frac{1}{2}$ 12, 5th Con., Litchfield	do	.....	150 00	
do 4, 1888	Widow J. Vaillant	do	Lot 14, 3rd Con., Litchfield	do	.....	110 00	
do 6, 1888	J. Young	do	Lot 4, Con. A, Mansfield	do	.....	400 00	
Feb. 2, 1889	W. Sharpe <i>et al.</i>	do	Lots 9, 10, Con. D, Westmeath	do	.....	200 00	
Apr. 9, 1889	P. Buchanan	do	Lots 20, 21, Con. B do	do	.....	300 00	
Mar. 26, 1889	H. Baunon & A. Grégoire	do	Lot 1, 7th Con., Litchfield	do	.....	100 00	
Jan. 31, 1889	J. & G. Bryson	do	Lot 16, 1st Con., Mansfield	do	.....	175 00	
Apr. 17, 1889	Hon. G. Bryson, Jun.	do	Lot 27, 2nd Con. do	do	.....	125 00	
Jan. 31, 1889	John Bryson, M.P.	do	Island No. 9 and pt. 15, 1st Con., Mansfield	do	.....	200 00	
Apr. 18, 1889	Widow R. Stewart <i>et al.</i>	do	Lot 17, 2nd Con., Mansfield	do	.....	500 00	
Mar. 8, 1889	D. Frost	do	Lot 10, 1st Con., Lot rear $\frac{1}{2}$ 2, Con. B, Mansfield	do	.....	124 00	
do 20, 1889	J. Balland, Jun.	do	Lot rear $\frac{1}{2}$ 28, 7th Con., Grand Calumet	do	.....	75 00	
Apr. 13, 1889	W. Durrell	do	Lot 6, Con. R.S., do	do	.....	30 00	
do 13, 1889	W. T. Durrell	do	Lot 5, Con. R.S., do	do	.....	10 00	
Mar. 6, 1889	R. Humphrey <i>et al.</i>	do	Lot 30, 1st Con., Waltham	do	.....	75 00	
Jan. 16, 1889	J. Wilson	do	Lot 48, 2nd Con. do	do	.....	80 00	
Mar. 21, 1889	J. Humphrey	do	Lots 31, 33, 34, 1st Con., Waltham	do	.....	175 00	
Jan. 25, 1889	H. Connelly	do	Lots 31, 32, 33, 2nd Con., Mansfield	do	.....	325 00	
Apr. 17, 1889	H. Carrall	do	Lots 35, 36, 1st Con., Waltham	do	.....	160 00	
July 9, 1889	J. Trotter	do	Lot 8, 1st Con., Grand Calumet	do	.....	50 00	Calumet Island Reserve.
Sep. 18, 1889	A. Gervais <i>et al.</i>	do	Lots 3, 4, Con. C, Westmeath.	do	.....	25 00	

Oxford and New Glasgow Railway.

[illegible]

2ND. PROPERTY purchased, damaged, or sold by the Department of Railways and Canals, &c.—Continued.

Date of Signature.	Vendors.	Purchasers.	Property purchased, sold, or damaged.	For what Purpose.	Area of Land.	Amount Paid.	Remarks.
			<i>Canadian Pacific Railway.</i>		Acres.	\$ cts.	
Nov. 20, 1888	L. Hautier (trustees).	Her Majesty.	Lots 7, 8, Lytton Division, Yale District, B.C.	C. P. Ry.	8.05	150 00	
Oct. 16, 1888	Hudson Bay Co.	do	Lot NW $\frac{1}{4}$ Sec. 26, Tp. 12, R. 8 E.	Stonewall Branch.	6.38	1 00	
do 16, 1888	do	do	Lot SW $\frac{1}{4}$ Sec. 8, Tp. 13, R. 7 E.	do	0.34	1 00	Torrens certificate.
Feb. 1, 1889	Agnes Schultz.	do	Lots SW $\frac{1}{4}$ and SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 12, Tp. 12, R. 2 E.	do	8.02	75 00	
Oct. 1, 1888	Wm. Owens.	do	Lot N $\frac{1}{2}$ NW $\frac{1}{4}$ Sec. 12, Tp. 12, R. 2 E.	do	0.88	15 00	
May 20, 1884	Hon. A. Boyd	do	Lot 41, St. John, Selkirk	do	1.61	1 00	
do 20, 1884	Alfred Boyd	do	Lot 42, do	do	1.60	1 00	
Apr. 18, 1884	W. N. Kennedy	do	Lot NE $\frac{1}{4}$ 24, Tp. 11, R. 2 E.	do	6.14	1 00	
Feb. 18, 1888	L. Clark	do	Leg. Subd. 3 and 6, of Sec. 7, and 11, 14 of Sec. 6, Tp. 3, R. 4 E.	Pembina Branch.	8.00	40 00	
June 15, 1888	N. R. Slater	do	Lot NW $\frac{1}{4}$ Sec. 15, Tp. 3, R. 3 E.	do	0.46	2 30	
Dec. 14, 1888	D. Ross	do	Lot 1000, St. Boniface (wind mill for water tank).	do		270 00	Receipt.
Aug. 15, 1888	Manitoba Mortgage & Inv. Co., Limited.	do	Lot 74, Sta. Agathe.	do	2.60	26 00	
Dec. 21, 1888	E. Taylor.	do	Lots 198, 199, St. Norbert	do	3.46	27 50	Torrens certificate.
do 27, 1888	Merchant's Bank.	do	Lots NE $\frac{1}{4}$ and N $\frac{1}{2}$ SE $\frac{1}{4}$ Sec. 36, Tp. 8, R. 3 T.	do	6.00	6 00	do
Oct. 16, 1888	Hudson Bay Co.	do	Sec. 8, Tp. 2, R. 3 E.	do	12.00	1 00	
do 11, 1888	W. J. Whitley (Lond. & Ontario Inv. Co., Limited).	do	S. W. $\frac{1}{4}$ sec. 5, tp. 12, R. 3 E.	do		8 60	
Feb. 14, 1889	F. Proudfoot & Co.	do	Lot NW $\frac{1}{4}$ Sec. 31, Tp. 4, R. 4 E.	do	3.13	23 40	Torrens certificate.
Dec. 5, 1888	Western Canada Loan, &c., Co.	do	S. E. $\frac{1}{4}$ section 1, township 9, R. 3 E.	do	4.00	20 00	
Mar. 1, 1889	L. Hunter	do	S. E. $\frac{1}{4}$ and S. $\frac{1}{2}$ N. E. $\frac{1}{4}$, sect. 13, tp. 5, R. 3 E.	do	6.00	60 00	Torrens' certificates.
Dec. 24, 1888	Jos. Taylor	do	N. E. $\frac{1}{4}$ sec. 13, tp. 5, R. 3 E.	do	2.00	10 00	
Sep. 27, 1884	S. Mulvey	do	S. W. $\frac{1}{4}$ sec. 36, tp. 11, R. 2 E., Selkirk.	Stonewall Branch.	0.35	1 00	
do 20, 1884	A. J. L. Peebles.	do	S. W. $\frac{1}{4}$ sec. 36, tp. 11 do	do	6.11	1 00	
June 3, 1884	J. Grisdale	do	S. W. $\frac{1}{4}$ sec. 1, tp. 12 do	do	6.17	61 70	
Mar. 6, 1884	Wm. Fraser	do	N. W. $\frac{1}{4}$ sec. 1, tp. 12 do	do	6.13	1 00	
Apr. 25, 1884	R. D. Bathgate	do	N. W. $\frac{1}{4}$ sec. 36, tp. 12 do	do	5.83	92 25	
do 18, 1884	Wm. N. Kennedy	do	S. W. $\frac{1}{4}$ sec. 2, tp. 13 do	do	6.15	50 00	
Dec. 4, 1883	W. W. Macalister.	do	S. E. $\frac{1}{4}$ sec. 10, tp. 13 do	do	6.23	80 00	
do 20, 1883	Wm. McDougall.	do	S. E. $\frac{1}{4}$ sec. 15, tp. 13 do	do	6.96	80 00	
Nov. 20, 1883	Wm. Nesbit.	do	N. E. $\frac{1}{4}$ sec. 21, tp. 13 do	do	4.39	45 00	
do 23, 1883	C. Mahon.	do	S. E. $\frac{1}{4}$ sec. 28, tp. 13 do	do			

Apl. 26, 1884	Jos. C. Bishop.....	Her Majesty..	S. W. $\frac{1}{2}$ sec. 22, tp. 13 do Lisgar..	do	6 23	1 00
Sep. 20, 1884	J. F. Bain.....	do	S. $\frac{1}{2}$ N. E. $\frac{1}{2}$ sec. 10, tp. 13, R. 2 E., Selkirk..	do	3 07	1 00
Jan. 6, 1887	D. Sinclair.....	do	Part lot 35, St. John, outer, 2 miles..	do	Not stated.	1 00
Apl. 15, 1889	St. John's Cathedral..	do	do 43 do	do	2 54	1 00
<i>Trent Valley Canal.</i>						
July 24, 1888	Louisa D. Bell <i>et al.</i> ...	do	Lot 3, East of Water St. and lot 3, West of Strickland St., Lakefield..	Damages by Lakefield dam..		50 00
Aug. 4, 1888	Wm. Garbutt.....	do	Lot W $\frac{1}{2}$ 21, 5th Con., Dourso..	Lovesick dam..		100 00
Sep. 19, 1888	Jos. Jory.....	do	Lot $\frac{1}{2}$ 7, 3rd Con., Emily. (The mill property at Omennee)..	Lakefield dam..		100 00
July 25, 1888	T. Stephenson.....	do	Lot S. $\frac{1}{2}$ 10, 5th Con., Emily..	Buckhorn dam..		2,000 00
Sep. 12, 1888	A. & T. H. McQuade..	do	Lot S. E. $\frac{1}{4}$ 8 and S. $\frac{1}{2}$ 9, in 5th Con., and lot N. $\frac{1}{4}$ 8 and N. $\frac{1}{4}$ 9, in 4th Con., Emily..	do		30 00
do 12, 1888	A. & B. J. McQuade..	do	Lot N. W. $\frac{1}{4}$ 12, in 6th Con., Emily..	do		84 00
do 12, 1888	A. & W. R. McQuade	do	Fox Island (or A. B.), tp. Harvey..	do		51 00
Oct. 16, 1888	C. Harrington <i>et al.</i> ...	do	Lots 12, 13, 14, in 5th Con., Emmismore..	do		200 00
Nov. 24, 1888	Estate J. Harrington.	do	Lot 10, in 8th Con., and lot E. $\frac{1}{2}$ 10, in 9th Con., Harvey..	do		120 00
do 27, 1888	M. Grundy.....	do	Lot N. $\frac{1}{2}$ 11, in 7th Con., Emmismore..	Lovesick dam..		150 00
Dec. 10, 1888	P. O'Connor.....	do	Lot E. $\frac{1}{2}$ 22, 5th Con., Emily..	Buckhorn dam..		50 00
1889	J. R. Boate <i>et al.</i> ...	do	Lot S. pt. 10, 8th Con., Emmismore..	Damages by Buckhorn dam..		50 00
June 10, 1889	M. O'Connor <i>et al.</i> ...	do	Lot 35, 12th Con., Smith..	do	100 00	100 00
do 17, 1889	Ellen Young.....	do		Lakefield dam..		25 00
<i>Tay Canal.</i>						
Oct. 18, 1888	Geo. Graham.....	do	Lot 16, N. of South St.; lot 15 N. and 16, S. Robinson St.; lot 15, S. of Halton St., and lot N. on Robinson St., Perth.....	Tay Canal..		100 00
do 15, 1888	J. Arthur <i>et al.</i>	do	Lot 11, N. of Cockburn St., and lot 11, S. of Brock St., Perth..	do		200 00
do 22, 1888	R. Stone.....	do	Lots 10, 11, S. Craig St. and lot 11, N. Brock, St., Perth..	do		300 00
do 19, 1888	S. T. Dawson.....	do	Island in Tay River, removal of bridge and cutting road on lots 21, $\frac{1}{2}$ 22, $\frac{1}{2}$ 23 in 9th Con., North Elnesley..	do		
Nov. 3, 1888	E. Cameron.....	do	Lot 14, N. Halton St., town of Perth..	do	0 31	1,000 00
do 21, 1888	W. Nievens.....	do	Lot 11, S. Cockburn St., do	do	0 21	75 00
Dec. 4, 1888	Corp. North Elnesley.	do	Closing road between lots in 9th and 10th Con., North Elnesley..	do		75 00
do 5, 1888	J. R. Matheson <i>et al.</i> ..	do	Lots 5, 6, de Watteville St., Perth..	do	0 20	500 00
do 6, 1888	J. Templeton (executors).....	do	Lot 7 do	do	0 20	400 00
do 22, 1888	D. Low.....	do	Part lot 5 do	do	0 17	550 00
						250 00
						On S. D. Dawson's lot.
						And release.
						\$1 to John Oatway, loss of annuity.

2nd. PROPERTY purchased, damaged, or sold by the Department of Railways and Canals, &c.—Continued.

Date of Signature.	Vendors.	Purchaser.	Property Purchased, Damaged or Sold.	For what Purpose.	Area of Land.	Amount Paid.	Remarks.
Dec. 18, 1888	J. McMaster	Her Majesty	<i>Tay Canal—Continued.</i>		Acres.	\$ cts.	
Nov. 30, 1888	E. G. Malloch <i>et al.</i>	do	Lot 10, N. of Craig St., and lot 10 S. of Harvey St., Perth.	do	0.88	500 00	And release.
		do	Lots 12 and 13, S. of Cockburn St., Perth.	do	0.54	100 00	do
June 25, 1888	L. Flagg <i>et al.</i>	do	<i>Williamsburg Canals.</i>	Rapide Plat	1.442	3,066 67	Fencing and main-
May 18, 1889	S. Robertson	do	Lots 6, 7 and part of road, 1st Con., Matilda.	do		167 67	tenance.
Apr. 3, 1889	T. Moorehouse	do	Fencing lots 5 and 6, 1st Con., Matilda.	do			
		do	Fencing lots E. $\frac{1}{4}$ of W $\frac{1}{4}$ and W $\frac{1}{4}$ of E $\frac{1}{2}$ 5, in 1st Con., Matilda	do			
Sep. 10, 1889	Sarah Shaver	do	Lot W. $\frac{1}{2}$ 11, in 1st Con., Edwardsburg.	Galops Canal	0.33	30 00	
Aug. 3, 1889	Susan Poupore	do	Lot 12, in 1st Con., Edwardsburg.	do	0.028	10 00	
do 13, 1889	Geo. Bolton	do	Lot E. $\frac{1}{2}$ 13, in 1st Con., Edwardsburg	do	0.295	75 00	
Dec. 13, 1888	Plooma Rooney	do	<i>Welland Canal.</i>	Obstructing East Street.		480 00	Damages.
Mar. 6, 1889	E. Beamsley	do	Lot B, East St., Port Colborne.	Dunville damages		85 00	Release.
Aug. 11, 1888	Corp. township Dunn.	do	Part lot 5, Dockstader tract, Canborough.	do		306 00	do
July 12, 1888	S. Murphy <i>et al.</i>	do	Damages to roads and bridges, tp. Dunn.	do		140 00	do
Aug. 4, 1888	Estate J. Beatty	do	Lot S. $\frac{1}{2}$ 13, in 3rd Con., North Cayuga.	do		192 00	do
Oct. 6, 1888	Her Majesty.	Corp. St. Catharines	Part lots 12 and 13, 1st Con., Dunn.	do			
Nov. 29, 1888	Mary Stevenson	Her Majesty	Pes. Lots 9, 10, 7th Con. Grantham	Cemetery	0.74	80 00	Special grant.
do 28, 1888	do	do	Lots 31, 32, 33, 1st Con., North Cayuga.	Damages by Dunnville Dam.		60 00	Release.
Jan. 24, 1889	D. Manson	do	Lots 30, 31, 32	do		52 00	do
Feb. 4, 1889	W. A. McCrae <i>et al.</i>	do	Schooner "Erie Belle," damaged in passing through the Canal	Damages		1,000 00	do
Mar. 1, 1889	Mary Braund	do	Lot No. 1, Indian Reserve, Dunnville.	Dunnville Dam		83 00	do
		do	Lots 1 and 22 and E $\frac{1}{2}$ 23, Indian Reserve, Dunnville.	do		75 00	do

Feb. 1, 1889) T. W. Holmes <i>et al.</i>	do	Lots 19, 20, 21 in Village Dunnville.....	do	.....	480 00	do
Jan. 30, 1889) S. M. Davis <i>et al.</i>	do	Lots 4, 5, 3rd Con., North Cayuga	do	.....	20 00	do
Dec. 27, 1888) H. Hanham	do	Lot 30, 7th Con., Crowland, and damages to Lots 29, 30, 31 .....		.....
Sep. 12, 1888) R. S. Thornton <i>et al.</i>	do	Lot 2, Indian Reserve, Township Moulton.....	Brown's Ditch.....	.....	250 00	Deed and release.
Apr. 17, 1889) E. & A. McDonald.....	do	Lot 9, 10, Ouse St., Town of Cayuga.....	Dunnville Dam .....	.....	50 00	Release.
May 20, 1889) J. Dickson <i>et al.</i>	do	Lot N $\frac{1}{2}$ 6, 2nd Con., Dover Road, Dunnville	do .....	.....	99 00	do
do 20, 1889) A. Dickson	do	Lot S pt. 6, 2nd Con. do	do .....	.....	35 00	do
June 22, 1889) M. J. Johnson <i>et al.</i>	do	Lots 18, 19, 20, Dunnville, or 1 Moulton	do .....	.....	190 00	do
do 22, 1889) J. T. Johnson <i>et al.</i>	do	Lot W $\frac{3}{4}$ 18 do	do .....	.....	135 00	do
do 13, 1889) S. Burnham <i>et al.</i>	do	Lots 7, 8, Huff tract, pt. 19, 3rd C., N. Cayuga	do .....	.....	9 00	do
Aug. 21, 1889) W. M. Hendershot.....	do	Lot 15, Thorold	Canal enlargement.	.....	325 00	do
				.....	1,322 00	Deed

3RD. AGREEMENT respecting subsidies granted by the Dominion Government to aid the Minister of Railways and Canals, during

Date of Signature.	Name of Railway Company.	Lines of Railway to be constructed.	Acts of Canada Granting Subsidy.	Number of miles to be Subsidized.
Aug. 19, 1889	Ottawa and Gatineau Valley Railway Co.	Hull, P.Q., towards Le Désert.	52 Vic., c. 3.	62
Sep. 4, 1888	Tobique Valley Railway Co.	Perth Centre Station of New Brunswick Railway, towards Plaister Rock Islands.	50-51 Vic., c. 24.	14
Aug. 24, 1888	South Norfolk Railway Co.	Port Rowan to Simcoe.	50-51 Vic., c. 24.	17
Sep. 4, 1888	Ontario and Quebec Railway Co.	London to Chatham, Ont.	49 Vic., c. 10.	65
July 31, 1888	Napanee, Tamworth and Quebec Railway Co.	} Tamworth to Tweed.	49 Vic., c. 10.	18
Aug. 16, 1888	Brantford, Waterloo and Lake Erie Railway Co.		50-51 Vic., c. 24	4
do 31, 1888	Qu'Appelle, Long Lake and Saskatchewan Railway and Steamboat Co.	{ Regina to Saskatoon. Land grant. This is a contract for transport of mails, &c. Government supplies on line so subsidized.	48-49 Vic., c. 60.	} 160
			50-51 Vic., c. 23.	
Feb. 14, 1889	Medicine Hat Railway and Coal Co.	Medecine Hat to Coal field in Tp. 12, 13, R. 6 W.	50-51 Vic., c. 23.	8
Dec. 5, 1888	Canada Atlantic Railway Co.	Bridge at Coteau Landing.	50-51 Vic., c. 24.	.....
May 6, 1889	Woodstock and Centreville Railway Co.	Upper Woodstock Station on New Brunswick Railway, to or towards Centreville.	50-51 Vic., c. 24.	20
Oct. 15, 1888	Nova Scotia Central Railway Co.	Lunenburg in New Germany, to Middleton, on Windsor and Annapolis Railway.	51 Vic., c. 3.	39½
Dec. 5, 1888	Quebec and Lake St. John Railway Co.	Chambord Junction, near Lake St. John, towards Chicoutimi.	51 Vic., c. 3.	30
Feb. 11, 1889	Vaudreuil and Prescott Railway Co.	Grand Trunk Railway, at Vaudreuil, towards Hawkesbury.	50-51 Vic., c. 24.	30
Jan. 22, 1889	Temiscouata Railway Co.	Edmundston towards River St. Francis.	51 Vic., c. 3.	20
May 2, 1889	Drummond County Railway Co.	End of line covered by contract of 1st Dec., 1887, towards Nicolet.	50-51 Vic., c. 24.	17½
July 20, 1889	Oshawa Railway and Navigation Co.	Port Oshawa to Town of Oshawa, thence back of East Whitby.	50-51 Vic., c. 24.	7

OTTAWA, 25th October, 1889.

in the construction of Railways, entered into by certain Railway Companies, with the Fiscal Year ending 30th June, 1889.

Amount of Subsidy.		Maximum Grade Feet per mile.	Radius of Curvature, not less than—	Width of clear- ing each side.		Width of cut- tings.	Embankments.	Steel Rails, lbs., per lineal yard.	When to be completed.	Remarks.
Per mile.	Not more in all than.									
\$	\$	Feet.	Feet.	Ft.	Ft.	Ft.	Lbs			
.....	320,000	106	574 (10°)	50	20	15	56	Aug. 1, 1893	Former subsidy lapsed.	
.....	89,600	80	{ 819 (7°) 716 (8°) }	50	20	15	56	{ Dec. 31, 1888 Sept. 1, 1888 }	Extension by O. C. to 1st Sept., 1889.	
3,200	54,400	58	1,910 (3°)	50	20	15	56	July 1, 1889		
3,200	256,000	53	2,865 (2°)	50	20	15	56	Aug. 1, 1890		
.....	70,000 }	80	955 (6°)	50	20	15	56	Aug. 1, 1890		
3,200	12,800 }									
3,200	57,600	40	1,719 (3°.20)	50	20	15	56	Aug. 1, 1891		
6,400 acres per mile. }		.....	.....	.....	.....	.....	.....	July 1, 1889	Land subsidy for 1st 50 miles; subject to ap- proval of Parliament.	Land subsidy.
\$50,000 per year.... }		.....	.....	.....	.....	.....	.....	.....
6,400 ac. per mile, about 51,354 acres.		85	955 (6°)	50	20	15	56	June 2, 1890		
15 % on value of struc- ture, not over \$180,000.		.....	.....	.....	.....	.....	.....	Aug. 1, 1891	Supplemental agreement of 12th July, 1889, for operating bridge.	
3,200	64,000	80	955 (6°)	50	20	15	56	Oct. 1, 1890		
3,200	147,200	80, 87	882 (6½°)	50	20	16	56	Dec. 31, 1890		
3,200	96,000	80	{ 955 (6°) 818 (7°) }	50	20	15	56	Aug. 1, 1890		
3,200	96,000	53	1,910 (3°)	50	20	15	56	Aug. 1, 1891		
.....	100,000	70	818 (7°)	50	20	15	56	Aug. 1, 1892		
3,200	96,000	63	1,433 (4°)	50	20	15	56	April 1, 1890		
3,200	22,400	93	410 (14°)	50	20	15	56	Aug. 1, 1890		

H. A. FISSIAULT.

APPENDIX No. 19.

CANADIAN GOVERNMENT RAILWAYS.

OFFICE OF THE CHIEF ENGINEER AND GENERAL MANAGER,
OTTAWA, 8th November, 1889.

SIR,—I have the honor to submit to you my annual remarks upon the progress made in the construction of railways to which Parliamentary grants of cash subsidies have been made.

(1) Railways receiving cash mileage subsidies are 79 in number, of an aggregate length of 3,037 miles, and to these cash subsidies have been granted to the extent of \$11,748,607. Of these railways 59 have entered into contracts under the Subsidy Act, the works upon which are completed or in progress, 44 having earned and received \$5,709,872, leaving 15 which have not progressed sufficiently to have earned any portion of the subsidies granted to them.

(2) Railways receiving cash subsidies otherwise than by the mile. These are 8 in number, having an aggregate mileage of 2,489 miles. Of these 5, representing 2,450 miles, are completed and under traffic, the other 3 being in progress.

The Annapolis and Digby Railway, 20 miles, is being constructed by the Government for the Western Counties Railway Company. The Chignecto Marine Transport Railway, a novel work, is being rapidly built, and promises to be ready for traffic at an early date. The St. Clair Frontier Tunnel is intended to connect the railway systems of the United States and Canada. It will be a most useful work, and it is being vigorously pushed forward, substantial progress having already been made.

I am, Sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

Chief Engineer and General Manager.

A. P. BRADLEY, Esq.,

Secretary, Department Railways and Canals.

List of Railways to which other than Mileage Cash Subsidies are Granted, showing Amount Granted and Amount Paid.

Name of Railway.	No. of Miles.	Amount of Subsidy.	Amount paid to 30th June, 1889.	Amount paid to 4th November, 1889.	Miles under Contract.	Remarks.
Annapolis and Digby.....	20	500,000	.....	.....	20	Being constructed by Government for Western Counties Ry. Co.
Atlantic and North-West (Short Line).....	353	*250,000	Nil.	.....	353	*Per annum for 20 years; 253 miles completed and in operation.
Canada Central.....	120	1,440,000	1,400,000	1,440,000	120	Completed and in operation.
Canadian Pacific.....	1,905	25,000,000	25,000,000	25,000,000	1,906	do
Chignecto Marine.....	17	*170,602	Nil.	Nil.	17	*Per annum; work in progress.
Esquimaux and Nanaimo.....	71	750,000	750,000	750,000	71	Completed and in operation.
Fredericton and St. Mary's Railway Bridge Co.....	1	30,000	30,000	30,000	1	do
St. Clair Frontier Tunnel.....	2	375,000	Nil.	Nil.	2	Work in progress.

COLLINGWOOD SCHREIBER.

OTTAWA, 4th November, 1889.

[1889]

List of Railways to which Mileage Subsidies are granted, showing the Amount of Subsidy granted, and Amount aid up to 4th November, 1887.

Name of Railway.	Number of Miles.	Amount of Subsidy Granted.	Amount of Subsidy Paid to 30th June, 1889.	Amount of Subsidy Paid to 4th November, 1889.	Number of Miles for which Contracts have been made.	Remarks.
Albert Southern	16	51,200	19,428	20,815	16	Track laid upon about 10 miles.
Anstehstung, Lake Shore and Blenheim	20	64,000	Nil.	Nil.	Nil.	No contract.
Baie des Chaleurs	70	620,000	375,500	524,175	70	Track laid upon about 60 miles.
Brookville, Westport and Sault Ste. Marie	60	192,000	45,000	45,000	40	Track laid upon about 40 miles, and trains running.
Belleville and North Hastings	7	22,400	21,888	21,888	7	do
Beauharnois Junction	30	96,000	54,650	54,650	30	do
Brantford, Waterloo and Lake Erie	18	57,600	Nil.	Nil.	10 $\frac{1}{2}$	No work done.
Buctouche and Moncton	32	102,400	61,054	61,054	32	Track is laid upon about 32 miles, and trains running.
Cap Tourment towards Murray Bay	20	64,000	Nil.	Nil.	Nil.	No contract.
Carleton	67	224,000	224,000	224,000	67	Completed and in operation.
Central	40	128,000	Nil.	Nil.	40	Track laid upon about 40 miles, and trains running.
Canada Atlantic	59	314,400	102,355	102,355	59	59 miles completed and in operation.
Carillon and Grenville	12	38,400	Nil.	Nil.	Nil.	No contract.
Cornwallis Valley	14	44,800	Nil.	Nil.	14	Work in progress.
Cumberland	14	44,800	Nil.	25,900	14	Track laid upon about 14 miles.
Cap Rouge and St. Lawrence	12	38,400	Nil.	Nil.	Nil.	No contract.
Railway Mount Forest to Walkerton	24	76,800	Nil.	Nil.	Nil.	do
Drummond County	34 $\frac{1}{2}$	110,400	28,872	34,372	30	Track laid upon about 12 miles.
Dominion Line Company	7	22,400	15,360	15,360	7	Completed and in operation.
Elgin and Huron	30	96,000	96,000	96,000	30	do
Elgin, Paritodiac and Havelock	12	38,400	38,400	38,400	12	do
Gatineau Valley	62	320,000	Nil.	Nil.	62	Grading is in progress.
Great Northern	28	89,600	25,088	25,088	28	Track laid.
Grand Trunk, Georgian Bay and Lake Erie	15	48,000	Nil.	Nil.	Nil.	No contract.
Great Eastern	60	192,000	19,200	19,200	31 $\frac{1}{2}$	6 miles completed.
Guelph Junction	16	51,200	46,000	46,000	16	Completed and in operation.
Harvey Branch	3	9,600	5,554	5,554	3	Track laid throughout.
Hereford	49	156,800	63,900	63,900	49	Track laid on about 34 miles, and trains running.
International	49	156,800	152,960	152,960	49	Road completed and in operation.
Irondele, Bancroft and Ottawa	50	160,000	15,000	15,000	50	Track laid on 10 miles.
Joggins	18 $\frac{1}{2}$	58,400	26,138	27,555	13 $\frac{1}{2}$	Track laid on about 11 $\frac{1}{2}$ miles, and trains running.
Jacques Cartier Union	5	20,000	Nil.	Nil.	Nil.	No contract.

Kingston and Pembroke.....	15	48,000	48,000	15	Completed and in operation.
Kingston, Smith's Falls and Ottawa.....	20	64,000	Nil.	Nil.	No contract.
L. Assumption.....	34 ¹	11,200	11,200	34 ¹	Completed and in operation.
Lake Erie, Essex and Detroit River.....	27	118,400	106,500	27	do
Lake Temiscamie Colonization.....	33 ¹	113,200	26,400	19	Track laid on about 17 miles.
Leamington and St. Clair.....	16	51,200	51,200	16	Completed and in operation.
Massachusetts Valley.....	25	80,000	Nil.	Nil.	No contract.
Maskinonge and Nipissing.....	15	48,000	Nil.	Nil.	do
Mindic Branch.....	51 ¹	17,600	Nil.	51 ¹	No work done.
Montreal and Sorel.....	45	72,000	69,922	45	Completed and in operation.
Montreal and Champlain Junction.....	63	103,600	83,100	63	Track laid throughout, and trains running.
Montreal and Western.....	70	361,270	Nil.	70	Work commenced.
Montreal and Lake Maskinonge.....	10	32,000	19,700	10	Track laid throughout, and trains running.
Northern and Western.....	100	320,000	311,900	100	Completed and in operation.
Northern and Pacific.....	110	1,320,000	1,319,400	110	do
Napawee, Tanworth and Quebec.....	57	204,400	89,600	51	28 miles completed and in operation.
New Brunswick and Prince Edward Island.....	37	118,400	113,440	37	Completed and in operation.
N. va Scotia Central.....	80	256,000	156,390	80	Track laid throughout.
Ontario and Pacific.....	142	172,400	Nil.	82	No work done.
Ottawa and Parry Sound.....	22	70,400	Nil.	Nil.	No contract.
Oshawa.....	27	22,400	Nil.	7	Work commenced.
Parry Sound Colonization.....	40	128,000	Nil.	Nil.	No contract.
Port Arthur, Duluth and Western.....	84 ¹	271,200	Nil.	Nil.	do
Pontiac Pacific Junction.....	88	313,100	174,828	88	Track laid 70 miles, and trains running.
Pontiac and Renfrew.....	6	19,200	Nil.	4 ¹	Track laid throughout.
Quebec Central.....	105	348,342	60,342	66	15 miles completed and under traffic.
Quebec and Lake St. John.....	246	933,035	709,915	246	Track laid for about miles, and trains running.
Quebec, Montmorency and Charlevoix.....	30	96,000	Nil.	Nil.	Track laid 21 miles.
Richmond Hill Junction.....	5	16,000	Nil.	Nil.	No contract.
St. Catharines and Niagara Central.....	32	102,400	26,640	12	Track laid 12 miles, and trains running.
South Ontario Pacific.....	491 ¹	158,400	Nil.	Nil.	No contract.
South Norfolk.....	17	54,400	54,400	17	Completed and in operation.
St. Louis and Richibucto.....	7	22,400	22,400	7	do
St. Lawrence and Lower Laurentian.....	39	217,600	92,813	39	Track laid for about 25 miles.
Railway from St. Césaire to St. Paul d'Abbotsford.....	5	16,000	Nil.	Nil.	No contract.
St. John Valley.....	44	140,800	Nil.	44	Grading commenced ; operations suspended.
Railway, St. Andrew's to Lachute.....	7	22,400	Nil.	Nil.	Grading and bridging in progress.
Ste-Warville Valley and Lansdowne.....	25	80,000	Nil.	25	No contract.
Railway, Sicoma's Narrows to Lake Okanagan.....	51	163,200	Nil.	Nil.	Completed and in operation.
Toronto, Grey and Bruce.....	5	16,000	14,656	5	Track laid about 80 ¹ miles, and train running.
Temiscaneta.....	103	598,000	412,900	103	No contract.
Railway, Truro to Newport.....	49	156,000	Nil.	Nil.	Grading in progress.
Tobique Valley.....	14	89,600	Nil.	14	4 miles completed and in operation.
Thousand Islands.....	17	54,400	Nil.	4	20 miles completed and in operation ; balance in progress.
West Ontario Pacific.....	80	256,000	60,800	80	Grading and bridging in progress.
Vandwell and Prescott.....	30	96,000	Nil.	30	No substantial progress made.
Railway, Woodstock to Centreville.....	20	64,000	Nil.	20	
	3,037	11,748,607	5,281,403	2,353 ¹	

APPENDIX No. 20.

ALPHABETICAL List of Railways Subsidized by the Dominion Government.

AUTHORITY FOR GRANT.		CONDITIONS OF GRANT UNDER THE SUBSIDY ACT.							
A.D.	Designation of Act.	COMPANY OR WORK SUBSIDIZED.	Rate per Mile. Money, Land or Rails.	Esti- mated Number of Miles.	If per Mile.		If for a term of Years.	Total Subsidy.	
					Total for the whole work not to exceed--	\$ cts.		Money.	Land.
			\$		\$ cts.			\$ cts.	Acres.
[1889] 1887.	50-51 Vic., c. 23...	Alberta and Athabasca Ry. Co., Bow River on C.P.R., between Calgary and Crowfoot, to point near Town Plot of Edmonton.	6,400 acres	300				15,000 00	1,920,000
1886.	49 Vic., c. 10...	do	776 tons.					14,665 45	
1888.	51 Vic., c. 3...	Albert Ry. Co., Salisbury to Hopewell							
1884	47 Vic., c. 8...	do	3,200	16				51,200 00	
1889.	52 Vic., c. 3...	Albert Southern Railway Co., Hopewell to Alma	3,200	20				64,000 00	
1889.	52 Vic., c. 3...	Amherstburg and Lake Shore Ry. Co.							
1884.	47 Vic., c. 8...	Baie des Chaleurs Ry. Co., Metapedia towards Paspébiac.		70				300,000 00	
1883.	46 Vic., c. 25...	do						320,000 00	
1886.	49 Vic., c. 17...	do						620,000 00	
1889.	52 Vic., c. 3...	Acts of Amendment							
1887.	50-51 Vic., c. 24...	Beauharnois Junction Ry. Co., St. Martin's to Valleyfield...	3,200	30				96,000 00	
1885.	48-49 Vic., c. 59...	Belleville and North Hastings Ry. Co., Madoc to Eldorado...	1,500	7				10,500 00	
1886.	49 Vic., c. 10...	do	1,700					11,900 00	
1887.	50-51 Vic., c. 24...	Brantford, Waterloo and Lake Erie Ry. Co., Brantford to Hagersville or Waterloo, or some intermediate point on Canada Southern Railway							
		Brockville, Westport and Sault Ste. Marie Ry. Co., Brockville to Westport.	3,200	18				57,600 00	
1885.	48-49 Vic., c. 59...	do	3,200	40				128,000 00	
1889.	52 Vic., c. 3...	towards Palmer Rapids	3,200	20				64,000 00	
1886.	49 Vic., c. 10...	Buctouche and Moncton Ry. Co., Moncton to Buctouche.	3,200	30				96,000 00	
1887.	50-51 Vic., c. 24...	do	3,200	2				6,400 00	
		sidized to Moncton.							

ALPHABETICAL LIST of Railways Subsidized by the Dominion Government—Continued.

ALPHABETICAL LIST of Railways Subsidized by the Dominion Government—Continued.

CONDITIONS OF GRANT UNDER THE SUBSIDY ACT.									
A.D.	AUTHORITY FOR GRANT.	COMPANY OR WORK SUBSIDIZED.	If per Mile.				If for a term of Years.	Total Subsidy.	
			Rate per Mile, Money, Land, or Rails.	Esti- mated Number of Miles.	Total for the whole work not to exceed —	Money.		Land.	
	Designation of Act.		\$	\$ cts.	\$ cts.	Amount and duration of Instalments.	\$ cts.	Acres.	
1889.	52 Vic., c. 3.	Grand Trunk, Georgian Bay and Lake Erie Ry. Co., from Tara or point between Tara and Hepworth in the Town of Owen Sound.	3,200	15	48,000 00		48,000 00		
1886.	49 Vic., c. 10.	Great Eastern Ry. Co., Yamaska to River St. Francis.	3,200	10	32,000 00				
1887.	50-51 Vic., c. 24.	do St. Francis to St. Grégoire	3,200	30	96,000 00		192,000 00		
1889.	52 Vic., c. 3.	do St. Grégoire towards Chaudière Junction, I. C. R.	3,200	20	64,000 00				
1884.	47 Vic., c. 8.	Great Northern Ry. Co., St. Jérôme to New Glasgow.	3,200	10	32,000 00				
1886.	49 Vic., c. 10.	do New Glasgow or St. Lin to Montcalm.	3,200	18	57,600 00		112,000 00		
1889.	52 Vic., c. 3.	do St. Andrews to Lachute.	3,200	7	22,400 00				
1887.	50-51 Vic., c. 24.	Great North-West Central Ry. Co., Brandon to Battleford.	6,400 acres	450				2,880,000	
1888.	51 Vic., c. 3.	Guelph Junction Ry. Co., from Campbellville, on C. P. R., to Guelph.	3,200	16	51,200 00		51,200 00		
1887.	50-51 Vic., c. 24.	Halifax Cotton Co., iron rails	233 tons.		4,335 00		4,335 00		
1886.	49 Vic., c. 10.	Harvey Branch Ry. Co., from southern terminus of Albert Ry. to Harvey Bank.	3,200	3	9,600 00		9,600 00		
1889.	52 Vic., c. 3.	Hereford Ry. Co., Hereford to International Railway.	3,200	34	108,000 00		156,800 00		
1883.	46 Vic., c. 25.	do Cookshire to Quebec Central Ry. at Dudswell.	3,200	15	48,000 00		156,800 00		
1884.	47 Vic., c. 8.	International Ry. Co., Sherbrooke to International Boundary.	3,200	49	156,800 00		156,800 00		
1885.	48-49 Vic., c. 58.	International Ry. Co. (Atlantic and North-Western) Montreal to Harbors of St. Andrews, St. John and Halifax.		351		\$170,000 for 15 yrs., \$30,000 for 20 yrs., or \$250,000 per ann. for 20 yrs.			
1884.	47 Vic., c. 8.	Irondale, Bancroft and Ottawa Ry. Co., Victoria Branch of Midland Railway to Bancroft.	3,200	50	160,000 00		160,000 00		
1887.	50-51 Vic., c. 24.	Jacques Cartier Union Ry. Co., to extend and complete the line.			20,000 00		20,000 00		

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1886	49 Vic, c. 10.	Joggins Ry. Co., McCann Station to Joggins.	3,200	12	38,400 00				
1887	50-51 Vic, c. 24.	do from south end to the wharves.	3,200	14	4,000 00			58,400 00	
1889	52 Vic, c. 3.	do from some point on Joggins Ry. to Young's Mills	3,200	5	16,000 00				
1888	51 Vic, c. 3.	Kent Northern Ry. of New Brunswick, iron rails.	2,549 tons.		58,334 27			58,334 27	
1884	47 Vic, c. 8.	Kingston and Pembroke Ry. Co., Mississippi to Renfrew.	3,200	15	48,000 00			48,000 00	
1889	52 Vic, c. 3.	Kingston, Smith's Falls and Ottawa Ry. Co., Kingston towards Smith's Falls.							
1886	49 Vic, c. 10.	L'Assomption Ry. Co., L'Assomption to L'Epiphanie.	3,200	20	64,000 00			64,000 00	
1887	50-51 Vic, c. 24.	Lake Erie, Essex and Detroit River Ry. Co., Walkerville to Cedar Creek Station.	3,200	3½	11,200 00			11,200 00	
1885	48-49 Vic, c. 59.	Lake Temiscamingue Colonization Ry. Co., Long Sault to Lake Temiscamingue (amended).	3,200	27	118,400 00			118,400 00	
1887	50-51 Vic, c. 24.	do to overcomerapids of the Ottawa River at La Michargue, La Cave, Les Erables and La Montagne, and for construction of wharves and landings at such rapids.		6	19,200 00				
1887	50-51 Vic, c. 24.	do Long Sault to Lake Kippewa	3,200	2	12,400 00			113,200 00	
1889	52 Vic, c. 3.	do Mattawa towards Long Sault or Long Sault towards Mattawa.	3,200	10½	33,600 00				
1885	48-49 Vic, c. 59.	Leamington and St. Clair Ry. Co., Comber to Lake Erie.	3,200	15	48,000 00				
1887	50-51 Vic, c. 24.	do from N. end of section subsidized to Comber.	3,200	14	44,800 00			51,200 00	
1885	48-49 Vic, c. 60.	Manitoba and North-Western Ry. Co., Portage la Prairie to 20 miles from Albert.	3,200	2	6,400 00				
1886	49 Vic, c. 11.	do Branch from Todburn to Shelmouth.	6,400 acres	430				2,752,000	
1885	48-49 Vic, c. 60.	Manitoba South-Western Ry. Co., Winnipeg to White Water Lake.	6,400 do	26				166,400	
1888	51 Vic, c. 3.	Massawippi Ry. Co., from point on Atlantic and North-Western Railway, near Magog, to Ayer's Flat Station on the Massawippi Ry.	3,200	150				900,000	
1889	52 Vic, c. 3.	Massawippi Junction Ry. Co., Ayer's Flat to Coaticook.	3,200	10	32,000 00			32,000 00	
1889	52 Vic, c. 3.	Maskinonge and Nipissing Ry. Co., from near Maskinonge or Louiseville towards Parish of St. Michel des Saints, P.Q.	3,200	15	48,000 00			48,000 00	
1887	80-51 Vic, c. 23.	Medicine Hat Ry. and Coal Co., Medicine Hat to Coal Fields.	3,200	8					51,200
1887	50-51 Vic, c. 24.	Minudie Branch Ry. Co., from near River Hebert Ry. Bridge to Minudie.	6,400 acres						
1885	48-49 Vic, c. 59.	Montreal and Sorel Ry. Co., St. Lambert to Sorel.	3,200	5½	17,600 00			17,600 00	
1885	48-49 Vic, c. 59.	Montreal and Champlain Junction Ry. Co., Brousseau to Dundee	1,600	45	72,000 00			72,000 00	
1887	50-51 Vic, c. 24.	do Salmon River at Fort Covington to Massena Springs.	500	60	30,000 00				
1888	51 Vic, c. 3.	do from end of subsidized line.	3,200		64,000 00			103,600 00	
1886	49 Vic, c. 10.	Montreal and Western Ry. Co., St. Jérôme towards Le Désert.	5,161	70	9,600 00			361,270 00	
1886	49 Vic, c. 10.	Montreal and Lake Maskinonge Ry. Co., St. Felix to Lake Maskinonge.			361,270 00				
1887	50-51 Vic, c. 24.	For a line from Mount Forest to Walkerton.	3,200	10	32,000 00			32,000 00	
1883	46 Vic, c. 25.	Napanee, Tamworth and Quebec Ry. Co., Napanee to Tamworth	3,200	24	76,800 00			76,800 00	
1886	49 Vic, c. 10.	do do	3,200	28	89,600 00				
1887	50-51 Vic, c. 24.	Tamworth to Tweed.	3,200	18	70,000 00				
1889	52 Vic, c. 3.	do from N. end of section subsidized to Tweed.	3,200	4	12,600 00			204,400 00	
		do do Yarker to Harrowsmith and Harrowsmith to W. Sydenham.	3,200	3	32,000 00				
1885	48-49 Vic, c. 59.	New Brunswick and Prince Edward Ry. Co., Sackville to Cape Tormentine.	3,200	7				118,400 00	

[1889]

ALPHABETICAL LIST of Railways Subsidized by the Parliament of Canada—Continued.

AUTHORITY FOR GRANT.		COMPANY OR WORK SUBSIDIZED.		CONDITIONS OF GRANT UNDER THE SUBSIDY ACT.						
A.D.	Designation of Act.			Rate per Mile. Money, Land or Rails.	Esti- mated Number of Miles.	If per Mile.		If not a term of years.	Total Subsidy.	
				\$		\$	cts.	Amount and duration of instalments.	Money.	Land.
									\$	Acres.
1889	52 Vic., c. 3.	St. Clair Frontier Tunnel Co., for a tunnel under St. Clair River at or near Sarnia.				375,000 00			375,000 00	
1887	50-51 Vic., c. 24.	St. Lawrence and Lower Laurentian and Saguenay Ry. Co., Grand Piles to Junction with Lake St. John Ry.				217,600 00			217,600 00	
1884	47 Vic., c. 8.	St. Louis, Richibucto and Buctouche Ry. Co., Richibucto to St. Louis.		3,200	7	22,400 00			22,400 00	
1883	46 Vic., c. 26.	St. John Bridge and Railway Extension Co., to build bridge and connection.								
1886	49 Vic., c. 10.	St. John Valley and Riviere du Loup Ry. Co., Fredericton to the Village of Prince William.		3,200	22	70,400 00			140,800 00	
1887	50-51 Vic., c. 24.	do do William towards Town of Woodstock.		3,200	22	70,400 00			11,964 66	
1888	51 Vic., c. 3.	Steel Co. of Canada, N.S., Iron rails.		597 tons.						
1886	49 Vic., c. 10.	Stewiacke Valley and Lansdowne Ry. Co., from a point on Intercolonial Railway through Stewiacke Valley towards Iron Mines, &c.		3,200	25	80,000 00			80,000 00	
1882	45 Vic., c. 14.	{ Témiscouata Ry. Co., Rivière du Loup to Edmundston.		\$3,200 for 75 m.		240,000 00				
1885	48-49 Vic., c. 58.	{ do Branch from Edmundston towards St.		\$3,800 for 75 m.	83	258,000 00			398,000 00	
1888	51 Vic., c. 3.	{ do do (Gananoque to Gananoque Junction, G.T.R.		\$6,000 for 8 m.	20	100,000 00				
1889	52 Vic., c. 3.	{ do do (Gananoque Junction, G.T.R., to connect with Brockville, Westmeath and Sault Ste. Marie Ry.		3,200	4	54,400 00			54,400 00	
1887	50-51 Vic., c. 24.	{ do do (Tobique Valley Ry. Co., Perth Centre towards Plaister Rock.			13	89,600 00			89,600 00	
1886	49 Vic., c. 10.	{ do do (Toronto, Grey and Bruce Ry. Co., Glenaman to Wingham		3,200	5	16,000 00			16,000 00	
1889	52 Vic., c. 3.	{ do do (For a line, Truro to Newport.		3,200	49	156,800 00			156,800 00	

1887	50-51 Vic., c. 25...	Western Counties Ry., Yarmouth to Annapolis	3,200	80	256,000 00	500,000 00	.....
1886	49 Vic., c. 10.....	Western Ontario Pacific Ry. Co., Ingersoll to London <i>viâ</i> Chatham, Ont.	6,400 ac. in Man.	225	.....	256,000 00	.....
1884	47 Vic., c. 25.....	Winnipeg and Hudson Bay Ry. Co., Winnipeg to Hudson Bay.	12,000 ac. N. W. T. ...	425	.....	.....	6,880,000
1886	49 Vic., c. 11.....	Wood Mountain and Qu'Appelle Ry. Co., from Wood Mountain <i>viâ</i> Qu'Appelle and Fort Qu'Appelle to the Manitoba and the North-Western Railway.	6,400 ac.	240	.....	.....	1,536,000
1887	50-51 Vic., c. 24...	For a line, Woodstock towards Centreville.	3,200	20	64,000 00	64,000 00	.....
1887	50-51 Vic., c. 24...	Vaudreuil and Prescott Ry. Co., Vaudreuil towards Hawkesbury.	3,200	30	96,000 00	96,000 00	.....

Grants under Subsidy Acts—

Year.	Act.	Company or Work Susidized.
1884..	47 Vic., c. 8.....	Albert Southern Ry. Co., Solisbury to Hopeweli.....
1884..	47 Vic., c. 8.....	For a railway, Annapolis to Digby.....
1883..	46 Vic., c. 25.....	Baie des Chaleurs Ry. Co., towards Paspebiac.....
1886..	49 Vic., c. 10.....	Caraquet Ry. Co., for 10 miles, Lower Caraquet to Shippegan.....
1886..	49 Vic., c. 10.....	Cap Rouge and St. Lawrence, Lorette to Quebec.....
1884..	47 Vic., c. 8.....	Central Ry. Co. of N.B., Grand Lake to I.C.R.....
1885..	48-49 Vic., c. 59.....	Central Ontario Ry. Co., Coe Hill to Bancroft.....
1884..	47 Vic., c. 8.....	For a branch of the I.C. Ry., Derby to Indian Town.....
1886..	49 Vic., c. 10.....	Gananoque, Perth and James' Bay Ry. Co.....
1883..	46 Vic., c. 25.....	{ For first 50-mile section from Hull station.....
1884..	47 Vic., c. 8.....	Gatineau Valley Ry. Co. {
1885..	48-49 Vic., c. 59..	{ From Kazabazua to Le Désert.....
1883..	46 Vic., c. 25.....	{ Hull to Le Désert.....
		Great American and European Short Line Ry. Co., for 80 miles from Canso to Louisburg or Sydney.....
1884..	47 Vic., c. 8.....	{ From Grand Piles to Lake Edward.....
1885..	48-49 Vic., c. 59..	{ For a railway { From Grand Piles to Lake Edward.....
1884..	47 Vic., c. 8.....	Irondale, Bancroft and Ottawa Ry., Victoria Branch Midland Ry. to Bancroft.
1886..	49 Vic., c. 10.....	Lake Erie, Essex and Detroit Riv. Ry. Co., for 37 miles, Windsor to Leamington.
1885..	48-49 Vic., c. 59..	{ For 8 miles of railway from Long Sault to foot of Lake Temiscamingue.....
		Lake Temiscamingue Ry. Co. {
1886..	49 Vic., c. 10....	{ For wharves and landing stages.....
1887..	50-51 Vic., c. 24..	Massawippi Ry. Co., For 10 miles of their railway, Magog to Ayer's Flat.....
1883..	46 Vic., c. 25.....	{ For first 50 mile section out of St. Jérôme, P.Q.....
1884..	47 Vic., c. 8.....	Montreal and Western {
1884..	47 Vic., c. 8.....	{ From end of line subsidized towards Le Désert.....
		{ For a line of Railway from Tamworth towards Bogart or Bridgewater.
1885..	48-49 Vic., c. 59..	Napanee, Tamworth and Quebec Ry. Co. {
		{ For 16 miles of Railway, from Tam- worth towards Bogart or Bridgewater
1886..	49 Vic., c. 10.....	For a railway from Newcastle to opposite Chatham.....
1883..	46 Vic., c. 25.....	Northern Pacific Junction Ry., Gravenhurst to Calendar.....
1883..	46 Vic., c. 25.....	Northern and Western Ry. Co., I.C.R., near Miramichi to Morans (32 miles), near Dephy Village.....
1884..	47 Vic., c. 8.....	Ontario Pacific Ry., Cornwall to Perth.....
1887..	50-51 Vic., c. 24..	{
1885..	48-49 Vic., c. 59..	{ Ottawa Waddington and New York Ry. Co., Ottawa to Waddington.....
1882..	45 Vic., c. 14....	{
1883..	46 Vic., c. 25.....	{
1884..	47 Vic., c. 8.....	{
		{ For a railway, Oxford to Louisburg or Sydney.....
1886..	49 Vic., c. 10.....	Parry Sound Colonization Ry., Parry Sound to Sundridge.....

Cancelled, Amended or Lapsed.

Amount.		Authority for Change and Particulars.
\$		
31,171	Lapsed	Re-voted—52 Vic., c. 3.
64,000	Lapsed	
244,500	Lapsed	Re-voted—52 Vic., c. 3.
32,000	Cancelled . .	By 50-51 Vic., c. 24., 1887.—\$32,000 was voted for 7 miles, in place of 10 miles, and in lieu of grant made under 49 Vic., c. 10, to same work.
38,400	Lapsed	Re-voted—52 Vic., c. 3.
128,000	Lapsed	Re-voted—52 Vic., c. 3.
64,000	Lapsed	
140,000	Lapsed	Constructed by Government.
54,400	Lapsed	
160,000	Cancelled . .	By 48-49 Vic., c. 59, 1885.—The sum of \$320,000 was granted for 62 miles from Hull towards le Désert, in lieu of the subsidies granted by 46 Vic., c. 25, and 47 Vic., c. 8.
160,000	Cancelled . .	
320,000	Lapsed	Re-voted—52 Vic., c. 3.
.....	Amended . .	By 47 Vic., c. 8, sec. 2.—The words "To the Great American and Short Line Railway" were struck out; the word "the" substituted for "their," and figures "for 80 miles of" omitted. See also—Oxford to Louisburg or Sydney, below.
217,600	Cancelled . .	By 48-49 Vic., c. 59, 1885.—The same amount of subsidy, \$217,600, for a specified distance of 50 miles in lieu of that granted by 47 Vic., c. 8, for an unnamed distance.
217,600	Cancelled . .	By 50-51 Vic., c. 24, 1887.—Subsidy of \$217,600 was granted to the St. Lawrence, Lower Laurentine and Sagueuay Ry. Co., in lieu of subsidy granted by 48-49 Vic., c. 59.
145,000	Lapsed	Re-voted—52 Vic., c. 3.
118,400	Cancelled . .	By 50-51 Vic., c. 24, 1887.—\$118,400 was voted for 27 miles in place of 37 miles, and in lieu of grant made under 49 Vic., c. 10.
6,400	Cancelled . .	By 50-51 Vic., c. 24, 1887.—The grant of \$25,600 for 8 miles of railway, at \$3,200 per mile, was altered to \$19,200 for 6 miles, and a further sum of \$12,400 was granted (in lieu of the \$6,400 deducted from the \$25,600, and in lieu of the \$6,000 granted by 49 Vic., c. 10) to complete the three short sections of railway, about 2 miles in length, required to overcome the four rapids, known as La Mi-charge, La Cave, Les Erables and La Montagne, and for the construction of wharves and landing stages thereon.
6,000	Cancelled . .	
32,000	Cancelled . .	51 Vic., c. 3, grants subsidy of \$32,000 for the work, distance unnamed, in lieu of \$32,000 for 10 miles, under 50-51 Vic., c. 24.
160,000	Cancelled . .	By 49 Vic., c. 10, 1886.—A subsidy of \$361,270 was granted for 70 miles of their railway, in lieu of the subsidies granted under 46 Vic., c. 25, and 47 Vic., c. 8.
160,000	Cancelled . .	
70,400	Cancelled . .	By 48-49 Vic., c. 59.
70,000	Cancelled . .	By 49 Vic., c. 10.—A subsidy of \$70,400 was granted for 18 miles, in lieu of 16 miles, and in lieu of the subsidy granted under 48-49 Vic., c. 59.
19,200	Lapsed	
35,600	Lapsed	\$35,000 re-voted by 52 Vic., c. 3.
102,400	Cancelled . .	By 47 Vic., c. 8.—A subsidy of \$128,900 was granted for a line from Fredericton to Miramichi, in lieu of subsidy under 46 Vic., c. 25.
262,400	Lapsed	
19,200	Lapsed	
166,400	Lapsed	
224,000		
256,000		
\$30,000 p. ann. for 15 yrs., with lease or transfer of Eastern Ex- tension from New Glasgow to Canso.	Lapsed.	Work undertaken by Government and cost provided by special vote of Parliament.
128,000	Lapsed	Re-voted—52 Vic., c. 3.

[1889]

Grants under Subsidy Acts—

Year.	Act.	Company or Work Subsidized.
1886..	49 Vic., c. 10.....	For a railway from point on C.P.R. to Eganville.....
1884..	47 Vic., c. 8.....	Quebec Central Ry. Co., Beauce Junction to International Boundary.....
1887..	50-51 Vic., c. 24...	Saguenay and Lake St. John Ry. Co., for 30 miles, Lake St. John towards Chicoutimi, or Chicoutimi towards Lake St. John.
1884..	47 Vic., c. 8.....	For a railway, St. Andrew's to Lachute.....
1886..	49 Vic., c. 10.....	For a railway, St. Andrew's to Lachute.....
1886..	49 Vic., c. 10.....	For a railway, St. Eustache to St. Placide.....
1887..	50-51 Vic., c. 24...	Temiscouata Ry. Co., for 30 miles, Edmundston towards St. Francis River.....
1885..	48-49 Vic., c. 59..	Thunder Bay Colonization Ry. Co., Murillo to Crooked Lake.....
1886..	49 Vic., c. 10....	
1886..	49 Vic., c. 10.....	For a railway, for 28 miles, Perth Centre to near Plaister Rock.....
1886..	49 Vic., c. 10.....	For a railway, Truro to Newport.....

Cancelled, Amended or Lapsed.

Amount.		Authority for Change and Particulars.
\$		
70,000	Cancelled...	By 51 Vic., c. 3.—A subsidy of \$70,000 was granted to Ottawa and Parry Sound Ry. Co. for 22 miles of their road, in lieu of subsidy under 49 Vic., c. 10.
150,858	Cancelled...	By 51 Vic., c. 3.—The grant of \$211,200, under 47 Vic., c. 8, was reduced to \$60,342 for 15 miles, and in lieu of the unexpended balance of \$150,658, a new grant of \$288,000 was authorized to complete the line to the Atlantic and N.W. Ry. near Moose River, a distance of 90 miles. Total subsidy to the company is \$60,342 + \$388,000 = \$348,342.
96,000	Cancelled by transfer.	51 Vic., c. 3.—Transferred the subsidy to the Quebec and Lake St. John Railway Company.
22,400	Cancelled...	49 Vic., c. 10.
22,400	Cancelled...	Re-voted—52 Vic., c. 3.
57,600	Lapsed.....	
96,000	Cancelled...	By 51 Vic., c. 3.—A subsidy of \$100,000 was granted for 20 miles of the same road, in lieu of the subsidy of \$96,000 for 30 miles granted under 50-51 Vic., c. 24.
179,200	Cancelled. {	By 51 Vic., c. 3.—A subsidy of \$271,200 was granted to the Port Arthur, Duluth and Western Ry. Co. for 84½ miles of railway from Port Arthur to Gun Flint Lake, in lieu of the subsidies granted under 48-49 Vic., c. 59, and 49 Vic., c. 10.
92,000		
89,600		
	Cancelled...	By 50-51 Vic., c. 24.—A subsidy of \$89,600 was granted to the Tobique Valley Ry. Co. for 14 miles of the road, in lieu of 28 miles, and in lieu of the subsidy granted under 49 Vic., c. 10.
156,800	Lapsed.....	Re-voted—52 Vic., c. 3.

DEPARTMENT OF RAILWAYS AND CANALS, CANALS REVENUE BRANCH,

OTTAWA, 9th December, 1889.

A. P. BRADLEY, Esq.,

Secretary Railways and Canals Department.

SIR,—I have the honor to submit herewith the statements of the Canals Revenues collected during the year ended 30th June, 1889, with the financial statements and general statistics respecting the source whence the Revenues were derived.

The following summary shows an increase of \$17,534.00 after deducting the refunds made under authority of various Orders in Council modifying the Tariff :—

	1887-88.	1888-89.	Increase.	Decrease.
	\$	\$	Per cent.	Per cent.
Canals Tolls, &c.	320,300	342,285	6·86	
Hydraulic and other Rents.....	35,878	39,762	10·82	
	356,178	382,047		
LESS—Refunds under Orders in Council.....	35,640	43,975		
	320,538	338,072		

The following statement gives a summary of the Canal Revenue, showing increase or decrease on each canal :—

	1887-88.	1888-89.	Increase.	Decrease.
	\$	\$	Per cent.	Per cent.
Welland.....	154,645	183,008	18·34	
St. Lawrence.....	80,187	72,443		9·65
Chambly.....	22,006	23,285	5·81	
Ottawa.....	54,425	53,639		1·44
Rideau.....	5,923	7,140	20·54	
St. Peter's.....	2,794	2,510		10·16
Trent Valley.....	320	260		18·75
	320,300	342,285		
LESS—Refunds	33,311	43,107		
	286,989	299,178		

The following statement will exhibit the increases and decreases upon the Welland Canal, and the classes of articles upon which they arose :—

	1887-88.	1888-89.	Increase.	Decrease.
	\$	\$	Per cent.	Per cent.
Vessels	13,286	15,978	20·26	
Passengers	174	125		28·16
Produce of forest	15,231	22,385	47·03	
do animal	353	148		58·07
do agriculture	78,780	90,496	14·87	
Manufactures and merchandises	46,508	52,875	13·69	
Total tolls	154,332	182,007		
Fines and damages	312	1,000		
Total	154,644	183,007	18·34	
Less—Refunds	32,302	41,846		
	122,342	141,161		

The statement of grain transhipped at Ports Colborne and Kingston will be given in the supplementary report for the Season of Navigation.

I have the honor to be, Sir,

Your obedient servant,

B. H. TEAKLES,

Chief Clerk Canals Revenue.

CANALS,

No. 1.—Collectors of Canal Tolls

(For Details, see

Dr.

Balances due by Collectors, &c., 1st July, 1888.	CANAL REVENUE.				Total Canal Revenue Accrued.	Hydraulic Rents and other Revenue from Public Works <i>Vide</i> Statements.	Total.
	Tolls.	Wharfage and Storage.	Fines and Damages.	Other Receipts.			
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
1,644 00	125,199 14	.....	.....	.....	.....	222 74	127,065 88
247 60	54,640 54	.....	.....	.....	.....	272 27	55,160 41
85 78	379 66	.....	.....	.....	.....	76 67	542 11
3 75	79 66	.....	.....	.....	.....	.....	83 41
112 22	1,132 57	.....	.....	.....	.....	297 00	1,541 79
.....	457 89	.....	1,000 00	.....	.....	3,210 09	4,667 98
10 72	118 44	.....	.....	.....	.....	.....	129 16
2,104 07	182,007 90	.....	1,000 00	.....	183,007 90	4,078 77	189,190 74
.....
136 34	688 11	46 00	20 00	.....	.....	895 00	1,785 45
202 61	15,895 88	.....	.....	.....	.....	790 00	16,883 49
.....	887 44	.....	.....	.....	.....	864 00	1,751 44
163 01	2,641 15	47 58	.....	1,386 78	.....	.....	4,238 52
.....	24,293 21	5,624 47	116 00	9,684 79	.....	26,667 34	66,385 81
741 48	11,111 47	.....	.....	.....	.....	.....	11,852 95
1,243 44	55,517 26	5,718 05	136 00	11,071 57	72,442 88	29,216 34	102,902 66
.....
.....	6,969 09	.....	5 00	.....	.....	80 00	7,054 09
.....	15,789 91	.....	10 00	.....	.....	.....	15,799 91
45 01	511 43	.....	.....	.....	.....	.....	556 44
45 01	23,270 43	.....	15 00	.....	23,285 43	80 00	23,410 44
.....
.....	33,926 74	.....	.....	.....	.....	.....	33,926 74
.....	17,597 13	.....	.....	.....	.....	.....	17,597 13
206 09	648 51	.....	2 00	.....	.....	20 00	876 60
77 43	1,465 25	.....	.....	.....	.....	.....	1,542 68
283 52	53,637 63	.....	2 00	.....	53,639 63	20 00	53,943 15
.....
.....	4,780 02	35 78	17 40	190 00	.....	503 75	5,526 95
25 08	1,540 52	.....	.....	15 00	.....	108 00	1,688 60
.....	543 70	.....	.....	17 40	.....	4 00	565 10
25 08	6,864 24	35 78	17 40	222 40	7,139 82	615 75	7,780 65

1888-89.
in Account with Revenue.
Appendix A.)

CR.

COLLECTION DIVISIONS.	DEPOSITED TO THE CREDIT OF THE RECEIVER-GENERAL.		Balances due by Collectors, &c., 30th June, 1889.	Total.
	On account of Canal Revenue.	On account of Hydraulic Rents and other Public Works.		
<i>Welland Canal.</i>	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Port Colborne	126,229 96	222 74	613 18	127,065 88
Port Dalhousie	54,351 73	272 27	536 41	55,160 41
Dunnville	465 44		76 67	542 11
Port Maitland	69 18		14 23	83 41
Port Robinson	1,233 01	297 00	11 78	1,541 79
St. Catharines	1,457 84	3,210 09	0 05	4,667 98
Chippawa	129 16			129 16
Totals	183,936 32	4,002 10	1,252 32	189,190 74
<i>St. Lawrence Canals.</i>				
Beauharnois	839 59	912 40	33 46	1,785 45
Cornwall	15,338 16	790 00	760 33	16,888 49
Cardinal	821 35	563 00	367 09	1,751 44
Lachine	4,189 66		48 86	4,238 52
Montreal	39,393 00	26,667 34	325 47	66,385 81
Kingston	11,056 98		795 97	11,852 95
Totals	71,638 74	28,932 74	2,331 18	102,902 66
<i>Chambly Canals.</i>				
Chambly	6,701 59	80 00	272 50	7,054 09
St. John's	15,799 91			15,799 91
St. Ours	525 59		30 85	556 44
Totals	23,027 09	80 00	303 35	23,410 44
<i>Ottawa Canals.</i>				
Ottawa	33,926 74			33,926 74
Grenville	17,597 13			17,597 13
Carillon	691 14	20 00	165 46	876 60
St. Anne's Lock	1,416 77		125 91	1,542 68
Totals	53,631 78	20 00	291 37	53,943 15
<i>Rideau Canals.</i>				
Ottawa	5,023 20	503 75		5,526 95
Kingston Mills	1,458 88	108 00	121 72	1,688 60
Smith's Falls	561 10	4 00		565 10
Totals	7,043 18	615 75	121 72	7,780 65

CANALS,

No. 1.—Collectors of Canal Tolls,

DR.

(For Details, see

Balances due by Collectors, &c., 1st July, 1888.	CANAL REVENUE.				Total Canal Revenue Accrued.	Hydraulic Rents and other Revenue <i>Vide</i> Statement No. 3.	Total.
	Tolls.	Wharfage and Storage.	Fines and Damages.	Other Receipts.			
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
35 82	169 18	.....	.....	.....	.....	.....	205 00
.....	18 18	.....	.....	.....	.....	.....	18 18
16 50	72 36	.....	.....	.....	.....	.....	88 86
52 32	259 72	.....	.....	.....	259 72	.....	312 04
167 15	2,510 50	.....	.....	.....	2,510 50	.....	2,677 65
3,920 59	324,067 68	5,753 83	1,170 40	11,293 97	342,285 88	34,010 86	380,217 33
					43,107 84	.....	43,107 84
					299,178 04	.....	337,109 49

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

1888-89—*Concluded.*
in Account with Revenue—*Concluded.*
Appendix A.)

CR.

COLLECTION DIVISIONS.	DEPOSITED TO THE CREDIT OF THE RECEIVER-GENERAL.		Balances due by Collectors, &c., 30th June, 1889.	Total.
	On account of Canal Revenue.	On account of Hyd. Rents and other Public Works.		
<i>Trent Valley Canal.</i>	\$ cts.	\$ cts.	\$ cts.	\$ cts.
.... Bobcaygeon.....	170 42	.....	34 58	205 00
.... Hastings.....	18 18	.....	.....	18 18
.... Peterborough.....	72 24	.....	16 62	88 86
..... Totals.....	260 84	.....	51 20	312 04
.... <i>St. Peter's Canal.</i>	2,311 74	.....	365 91	2,677 65
..... Grand Total.....	341,849 69	33,650 59	4,717 05	380,217 33
..... Less Refunds, per Statement 4.				
..... Net Revenue.				

B. H. TEAKLES,
Chief Clerk Canals Revenue.

CANALS,

No. 2.—COLLECTORS of Canal Tolls

(For Details, see

DR.

Amounts received from Department to meet Expenditure.	Deductions from Salaries for Super- annuations.	Balances due to Collectors, 30th June, 1889.	Total.	COLLECTION DIVISIONS.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	
3,476 53	65 00	.....	3,541 53	<i>Welland Canal.</i>
2,126 84	36 00	.....	2,162 84	Port Colborne.....
771 19	15 00	.....	786 19	Port Dalhousie.....
575 00	10 00	.....	585 00	Dunnville.....
738 54	14 40	.....	752 94	Port Maitland.....
202 75	4 00	.....	206 75	Port Robinson.....
128 50	2 00	.....	130 50	St. Catharines.....
8,019 35	146 40	.....	8,165 75	Chippawa.....
				Total.....
				<i>St. Lawrence Canals.</i>
1,310 83	17 00	.....	1,327 83	Beauharnois.....
1,205 25	20 00	.....	1,225 25	Cardinal.....
1,758 90	22 00	.....	1,780 90	Cornwall.....
1,195 59	22 00	.....	1,217 59	Kingston.....
2,169 15	34 00	.....	2,203 15	Lachine.....
8,196 70	142 00	.....	8,338 70	Montreal.....
15,836 42	257 00	.....	16,093 42	Total.....
				<i>Chambly Canal.</i>
1,573 81	26 25	.....	1,600 06	Chambly.....
1,533 66	24 25	.....	1,557 91	St. John's.....
621 76	.....	.....	621 76	St. Ours.....
3,729 23	50 50	.....	3,779 73	Total.....
				<i>Ottawa Canals.</i>
849 01	14 00	.....	863 01	Carillon.....
1,123 64	20 00	.....	1,143 64	Grenville.....
1,544 57	6 25	.....	1,550 82	St. Anne's Lock.....
3,517 22	40 25	.....	3,557 47	Total.....
				<i>Rideau Canal.</i>
464 00	5 00	.....	469 00	Kingston Mills.....
2,223 52	40 00	.....	2,263 52	Ottawa.....
337 85	3 75	.....	341 60	Smith's Mills.....
3,025 37	48 60	.....	3,074 12	Total.....
				<i>Hastings</i>
2 82	.....	.....	2 82	St. Peter's Canal.....
196 00	4 00	.....	200 00	
2,117 15	36 00	.....	2,153 15	Inspector of Canals.....
714 24	.....	.....	714 24	Queen's Printer.....
176 18	.....	.....	176 18	Stationery.....
1,202 13	.....	.....	1,202 13	General.....
38,536 11	582 90	.....	39,119 01	Grand Total.....

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

[1889]

1888-89.
in account with Expenditure.
Appendix B.)

Cr.

Balances due to Collectors, 1st July, 1888.	EXPENDITURE AUTHORIZED BY THE DEPARTMENT.					Total.
	Salaries.	Special Assistance.	Rent.	Travelling Expenses.	Sundries.	
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
	3,250 00	75 00	176 00		40 53	3,541 53
	1,800 00	85 00		140 00	137 84	2,162 84
	750 00				36 19	786 19
	500 00		75 00		10 00	585 00
	720 00			2 00	30 94	752 94
	200 00				6 75	206 75
	100 00		25 00		5 50	130 50
	7,320 00	160 00	276 00	142 00	267 75	8,165 75
	1,216 00			14 00	97 83	1,327 83
	1,150 00		50 00	8 50	16 75	1,225 25
	1,100 00	528 00	60 00		92 90	1,780 90
1 00	1,100 00	27 00	45 00		44 59	1,217 59
	1,700 00		360 00	36 30	106 85	2,203 15
	7,100 00		525 00	13 60	700 10	8,338 70
1 00	13,366 00	555 00	1,040 00	72 40	1,059 02	16,093 42
	1,500 00			36 00	64 06	1,600 06
	1,400 00	66 00			91 91	1,557 91
	600 00				21 76	621 76
	3,500 00	66 00		36 00	177 73	3,779 73
	700 00		100 00		63 01	863 01
	1,000 00		50 00		93 64	1,143 64
	1,499 96				50 86	1,550 82
	3,199 96		150 00		207 51	3,557 47
	400 00			34 00	35 00	469 00
	2,000 00			16 88	246 64	2,263 52
	300 00			10 85	30 75	341 60
	2,700 00			61 73	312 39	3,074 12
	200 00				2 82	2 82
	1,800 00			276 40	76 75	2,153 15
					714 24	714 24
					176 18	176 18
					1,202 13	1,202 13
1 00	32,085 96	781 00	1,466 00	588 53	4,196 52	39,119 01

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

HYDRAULIC AND OTHER RENTS.
No. 3—SUMMARY Statement of Lessees' Accounts.
(For Details, see Appendix A, No. 28.)

Balances due 1st July, 1888.	Accrued during the Year ended 30th June, 1889.	Total.	NAME OF WORK.	Author-ized Abate-ments.	Paid into hands of Collectors, <i>Vide</i> Statement No. 1.	Deposited to the Credit of the Receiver General.	Balances due 30th June, 1889.	Total.
\$ cts.	\$ cts.	\$ cts.		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
20,468 53	7,170 98	27,639 51	Welland Canal.	625 00	4,061 91	838 00	22,114 60	27,639 51
6,471 62	1,056 00	7,527 62	Williamsburg Canal	280 00	864 00	.....	6,383 62	7,527 62
872 50	825 00	1,697 50	Cornwall	.....	790 00	80 00	827 50	1,697 50
2,254 50	3,062 30	5,316 80	Beauharnois	859 50	895 00	1,068 30	2,494 00	5,316 80
16,925 44	25,919 88	42,845 32	Lachine	582 27	26,666 34	40 00	15,556 71	42,845 32
171 84	70 00	241 84	Chambly	.....	80 00	.....	161 84	241 84
5,912 10	1,252 20	7,164 30	Rideau	70 50	615 75	134 50	6,343 55	7,164 30
398 00	119 00	517 00	Sundry Accounts.	184 00	21 00	131 00	181 00	517 00
			<i>Land Sales.</i>					
6,350 92	287 00	6,637 92	Principal and Interest Accounts.	.....	.....	.....	6,637 92	6,637 92
59,825 45	39,762 36	99,587 81	Totals.	2,601 27	33,994 00	2,291 80	60,700 74	99,587 81

Amount of Hydraulic Rents accrued to 30th June, 1889. \$39,762 36
Less—Refunds. 868 31
Net Revenue. \$38,894 05

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

No. 4.—REFUNDS, 1888–89.

CANAL TOLLS.

Canal.	To whom Paid.	Date.	Office.	Under what Authority Refunded.	Amount.	Total.
		1888.			\$ cts.	\$ cts.
Welland	J. B. Fairgrieve & Son..	July 18	Port Colborne.	Refunded under Revised Statutes, Chap. 29 Sec. 8....	99 90	
do	K. & M. Forwarding Co.	do 18	do ..	do ..	321 84	
do	A. D. Thompson & Co..	do 18	do ..	do ..	115 92	
do	Montreal Transport Co..	do 24	do ..	do ..	3,074 76	
do	A. M. Robertson.....	Aug. 2	do ..	do ..	187 92	
do	K. & M. Forwarding Co.	do 13	do ..	do ..	207 54	
do	Montreal Transport Co.	do 20	do ..	do ..	2,428 56	
do	K. & M. Forwarding Co.	do 20	do ..	do ..	523 26	
do	A. H. Malcolmson.....	do 20	do ..	do ..	111 96	
do	J. B. Fairgrieve & Son..	do 20	do ..	do ..	99 90	
do	A. M. Robertson.....	do 20	do ..	do ..	187 02	
do	Montreal Transport Co.	do 21	do ..	do ..	3,066 48	
do	Æ. D. Mackay's Sons ..	do 22	do ..	do ..	97 20	
do	A. H. Malcolmson.....	do 22	do ..	do ..	108 00	
do	A. M. Robertson.....	do 21	do ..	do ..	177 30	
do	J. B. Fairgrieve & Son..	do 31	do ..	do ..	99 90	
do	K. & M. Forwarding Co.	do 31	do ..	do ..	116 64	
do	Frank T. Hill.....	Sept. 5	do ..	do ..	425 52	
do	Æ. D. Mackay's Sons ..	do 6	do ..	do ..	93 06	
do	K. & M. Forwarding Co.	do 6	do ..	do ..	227 16	
do	A. M. Robertson.....	do 14	do ..	do ..	85 94	
do	Æ. D. Mackay's Sons ..	do 14	do ..	do ..	96 12	
do	A. H. Malcolmson.....	do 14	do ..	do ..	105 84	
do	A. M. Robertson.....	do 20	do ..	do ..	100 00	
do	Montreal Transport Co..	do 24	do ..	do ..	3,933 90	
do	Æ. D. Mackay's Sons ..	do 24	do ..	do ..	90 54	
do	A. M. Robertson.....	do 24	do ..	do ..	177 48	
do	A. E. Hume.....	do 24	do ..	do ..	210 60	
do	K. & M. Forwarding Co.	do 27	do ..	do ..	104 22	
do	F. T. Hill.....	Oct. 8	do ..	do ..	115 92	
do	J. B. Fairgrieve & Son..	do 11	do ..	do ..	99 90	
do	A. M. Robertson.....	do 11	do ..	do ..	167 76	
do	A. H. Malcolmson.....	do 26	do ..	do ..	85 68	
do	Montreal Transport Co..	do 29	do ..	do ..	1,836 22	
do	do	Nov. 6	do ..	do ..	48 60	
do	Capt. D. N. Sherwood..	do 6	Port Dalhousie	do ..	17 40	
do	Montreal Transport Co..	do 17	Cornwall.....	do ..	9 84	
do	A. E. McKay & Sons....	do 29	Port Colborne.	do ..	273 42	
do	Montreal Transport Co..	Dec. 1	do ..	do ..	1,873 26	
do	J. B. Fairgrieve & Son..	do 3	do ..	do ..	50 22	
do	K. & M. Forwarding Co.	do 13	do ..	do ..	455 40	
do	J. & J. T. Mathews.....	do 20	do ..	do ..	20 00	
do	Montreal Transport Co..	do 28	do ..	do ..	1,953 90	
		1889.				
do	G. E. Jaques & Co.....	Jan. 4	do ..	do ..	120 96	
do	Crane & Baird.....	do 8	do ..	do ..	110 52	
do	J. B. Fairgrieve & Son..	do 22	do ..	do ..	45 00	
do	Hingston & Woods.....	Feb. 2	do ..	do ..	153 41	
do	Montreal Transport Co..	do 8	do ..	do ..	7 20	
do	E. & L. M. Transport Co.	do 20	do ..	do ..	14 20	
do	Bank of Montreal.....	do 27	do ..	do ..	244 50	
do	F. B. McNamee.....	March 1	do ..	do ..	44 76	
do	Montreal Transport Co..	May 4	do ..	do ..	3,385 98	
do	K. & M. Forwarding Co.	do 9	do ..	do ..	1,198 80	
do	do	do 9	do ..	do ..	343 26	
do	Jas. Malcolmson.....	do 22	do ..	do ..	103 86	
do	Montreal Transport Co..	do 28	do ..	do ..	2,693 88	

[1889]

No. 4.—REFUNDS, 1888-89—*Continued.*CANAL TOLLS—*Continued.*

Canal.	To whom Paid.	Date.	Office.	Under what Authority Refunded.	Amount.	Total.
					\$ cts.	\$ cts.
		1889.		Refunded under Revised Statutes, Cap. 29, Sec. 8.		
Welland....	K. & M. Forwarding Co.	June 5	Port Colborne.		762 66	
do	A. E. Hume.....	do 10	do	do	211 68	
do	K. & M. Forwarding Co.	do 11	do	do	803 16	
do	do	do 21	do	do	380 34	
do	Montreal Transport Co.	do 21	do	do	3,467 88	
do	J. B. Fairgrieve & Son..	do 21	do	do	99 90	
do	W. Ira Story.....	do 21	do	do	100 80	
do	J. Malcolmson.....	do 22	do	do	181 80	
do	Æ. D. MacKay's Sons ..	do 27	do	do	91 62	
do	A. E. Hume.....	do 27	do	do	82 44	
do	K. & M. Forwarding Co.	do 27	do	do	664 56	
do	Montreal Transport Co.	do 27	do	do	2,430 00	
do	J. B. Fairgrieve & Son..	do 27	do	do	97 20	
do	K. & M. Forwarding Co.	do 27	do	do	215 28	
do	W. Ira Story.....	do 27	do	do	108 36	
		1888.				1,846 01
St. Lawrence	A. Perrault.....	July 24	Montreal.	do	10 50	
do	F. C. Henshaw.....	do 24	do	do	3 15	
do	Kingsman Brown & Co.	Oct. 8	do	do	75 00	
do	Reid G. Metzler.....	do 15	Cardinal.....	do	4 00	
do	Ogdensburgh C. & T. Co.	Nov. 29	Cornwall.....	do	20 70	
do	Montreal Transport Co.	Dec. 27	Cardinal.....	do	33 24	
		1889.				
do	Ogdensburgh C. & T. Co.	Jan. 17	Cornwall.....	do	51 25	
do	J. B. Fairgreves.....	do 17	Montreal.	do	18 20	
do	K. & M. F. Co.....	do 21	Cardinal.....	do	95 77	
do	W. Broder.....	Feb. 20	do	do	25 34	
do	T. H. Phippen.....	Mar. 28	do	do	36 60	
do	Sincennes & McNaughton	May 22	Montreal.	do	88 25	
		1888.				462 00
Chambly....	J. Mochen.....	July 24	Chambly.....	do		20 00
Ottawa.....	T. D. Williamson.....	do 13	Grenville.	do	5 93	
do	A. P. McLaurin.....	do 13	do	do	8 82	
do	John Wade.....	do 13	(Grenville.	do	5 88	
do	A. Perrault.....	do 13	Carillon.....	do	5 34	
do	Jos. Grondin.....	do 17	Grenville.	do	4 50	
do	F. H. Wilson.....	do 21	Carillon.....	do	31 08	
do	S. Charette.....	do 21	do	do	16 67	
do	D. Murphy & Co.....	do 21	do	do	10 00	
do	J. B. Burnett.....	do 26	Ottawa.....	do	29 00	
do	Isaac Quindon.....	Aug. 10	Carillon.....	do	4 32	
do	do	do 10	do	do	6 48	
do	do	do 10	do	do	14 01	
do	J. A. Thérien.....	do 10	do	do	4 50	
do	Chas. Thérien.....	do 10	do	do	2 16	
do	W. J. Reid.....	do 22	do	do	9 50	
do	Thos. Mackan.....	do 25	do	do	33 45	
do	W. R. Mackan.....	do 25	do	do	9 30	
do	Jas. Mackan.....	do 25	do	do	8 33	
do	Ulric Gagnon.....	Sept. 3	do	do	7 50	
do	Wm. Lagacé.....	do 4	do	do	18 00	
do	Jas. Charette.....	do 5	do	do	33 73	
do	D. Murphy & Co.....	do 8	Grenville.	do	20 43	
do	F. Paul.....	do 12	Carillon.....	do	15 54	
do	Teresa Byrne.....	Oct. 11	do	do	9 38	
do	D. Murphy & Co.....	do 15	Ottawa.....	do	19 91	
do	J. B. Blanchard.....	do 15	Grenville.	do	10 43	
do	Felix Plouffe.....	Dec. 10	Carillon.....	do	28 51	
do	J. K. Ward.....	do 11	do	do	212 00	

No. 4.—REFUNDS, 1889–89—*Concluded.*

CANAL TOLLS—*Concluded.*

Canal.	To whom Paid.	Date.	Office.	Under what Authority Refunded.	Amount.	Total.
		1889.			\$ cts.	\$ cts.
Ottawa.....	L. T. Simpson.....	May 28	Carillon.....	Refunded under Re-vised Statutes, Cap. 29, Sec. 8.....	5 00	
do	A. St. Jean.....	June 7	do	do	9 00	
do	J. Lagacé.....	do 7	do	do	3 60	
do	Ulric Gagnon.....	do 10	do	do	3 00	
do	Wm. Legacé.....	do 18	do	do	24 00	
do	J. B. Laurin.....	do 21	do	do	1 02	
do	Xavier Alliar.....	do 21	do	do	4 29	
do	B. Lavoie.....	do 21	do	do	1 59	
do	E. Mainville.....	do 21	do	do	8 08	
do	Narcisse Mainville.....	do 21	do	do	6 40	
do	John Baptist.....	do 21	do	do	10 00	
do	H. Gerard.....	do 21	do	do	9 45	
do	J. Montreuil.....	do 21	do	do	7 71	
do	Elisha Cook.....	do 21	do	do	12 67	
do	Felix Plouffe.....	do 28	do	do	5 40	
do	Bazille Laurin, sr. . .	do 28	do	do	4 80	
do	F. X. Wilson.....	do 28	do	do	30 00	
do	Thos. McKan.....	do 28	do	do	23 32	
do	John Baptist Beaulieu..	do 28	do	do	25 80	
				Total Tolls refunded.		779 83
						43,107 84

HYDRAULIC RENTS REFUNDS.

Pt. Colborne	J. A. Black & D. E. MacFarland.....	1889. May 28				868 31
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B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued—CANALS.

No. 5.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, and the Amount of Revenue collected during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.		2										
Apples	233	624			1		81		1	83	84	16 75
Agricultural Products not enumerated, Vegetable.	7						45		233	669	902	33 72
“ “ Animal									7		7	0 14
Agricultural Implements.												
Barley		65		488					5,706	555	6,261	883 29
Bricks	52	19							52	19	71	2 59
Bones.												
Brinestone.					15				15		15	2 25
Cement and Water Lime.	42	6			232	4			274	10	284	40 59
Clay, Lime and Sand.	94		200						294	876	1,170	129 89
Coal.	101	350			183,637	1,804	19,880	24,019	203,618	26,173	229,791	45,136 62
Corn.						118,619		151,343		269,962	269,962	53,992 40
Cattle.												
Cotton, Raw.	76	65	1						77	66	143	4 07
Crockery and Earthenware.												
Dye Wood and Dye Stuffs												
Fish.	1		2		170				173		173	25 82
Flax and Hemp												
Flour	10	4,737				7,875			10	13,368	13,378	1,846 17
Furniture.	2		13			37			15	40	55	10 15
Gypsum.				715						715	715	43 94
Glass, all kinds.	7						2		7	2	9	0 67
Hay, Pressed.	18								18		18	0 40
Hogs.												
Horses.			3		1		3		4	4	8	1 40
Hides and Skins, Horns and Hoofs.										5	5	1 00
Ice.												
Iron, Railway.	30				63				93		93	10 02
“ Pig.					1,053		549		1,053	549	1,602	267 75
“ all other.	127	555	146				1		1,787	556	1,343	224 29
Iron Ore.			10,522						11,726		11,726	586 30

No. 5.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Continued.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tols.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Railway Ties, in Vessels.		25							375	228	603	\$ 76 66
“ “ Rafts												cts.
Saw Logs	280	1,827	375	203					606	5,044	5,650	206 55
Staves and Headings, Barrel			179	3,217			147	5		87	87	9 05
“ “ Pipe				82				757		757	757	141 43
“ “ West India.								1,194		1,194	1,194	223 32
Staves, Salt Barrel								2		2	2	0 15
Shingles	4					19			4	19	23	13 77
Split Posts and Fence Rafts, in Vessels												
“ “ Rafts	20	7,889						46,410	20	54,299	54,319	8,145 94
Timber, Square, in Vessels.	80								80		80	8 89
Traverses					59	7						
Woodenware and Wood, partly manufactured.								2	59	9	68	27 20
Total Freight paying Tolls	18,218	81,898	17,908	21,798	218,988	245,427	20,224	291,625	275,338	640,748	916,086	165,904 56
<i>Free Articles having paid Full Tolls on the St. Lawrence Canals.</i>												
Agricultural Products, not enumerated, Vegetable.												
Bricks			21						21		21	
Cement and Water Lime			156						156		156	
Clay, Lime and Sand	18		121						139		139	
Crockery and Earthenware	10		337						80		80	
Fish			9						347		347	
Furniture			1						9		9	
Glass, all kinds	40		95						1		1	
Horses			1						135		135	
Iron, Railway	2,853		7,908						1		1	
“ Pig			126						10,761		10,761	
“ all other	57		424						489		489	
Meal, all kinds			31						31		31	
Molasses			5						5		5	

Free Articles having paid Full Tolls on the St. Lawrence Canals.

Nails	147	407	.....	.....	.....	.....	554	.....	554
Oil, in Barrels.....	6	10	.....	.....	.....	.....	16	.....	16
Paint.....	32	21	.....	.....	.....	.....	53	.....	53
Salt	180	3,878	.....	.....	.....	.....	4,058	.....	4,058
Seeds, all kinds.....	.....	291	.....	.....	.....	.....	291	.....	291
Soda Ash	142	968	.....	.....	.....	.....	1,110	.....	1,110
Sugar	61	26	.....	.....	.....	.....	87	.....	87
Spirits, Beer, &c.....	6	225	.....	.....	.....	.....	231	.....	231
Tin	3	484	.....	.....	.....	.....	487	.....	487
Whiting .....	.....	12	.....	.....	.....	.....	12	.....	12
All other Goods and Merchandise, not enumerated.	255	940	.....	.....	.....	.....	1,195	.....	1,195
Barrels, Empty.....	.....	2	.....	.....	.....	.....	2	.....	2
Timber passed free from Welland to Port Robinson.	.....	.....	.....	.....	.....	.....	1,416	.....	1,416
Grand Total Freight.....	22,391	34,487	21,798	218,988	245,427	20,224	291,625	296,090	938,254
Total Tolls on Vessels.....									
" " Passengers.....									
" " Free Goods.....									
Fines and Damages.....									
Total Revenue, exclusive of Hydraulic Rents.....									
15,978 11									
125 23									
1,000 00									
183,007 90									

B. H. TEAKLES,
Chief Clerk Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued—CANALS.

No. 6.—GENERAL STATEMENT shewing the Quantity of each Article of Through Freight transported on the Welland Canal, and the Amount of Tolls collected thereon, during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Ashes, Pot and Pearl.		2										
Apples					1				83	0 15	16 60	16 75
Agricultural products not enumerated, Vegetable.							1		45		9 00	9 00
Agricultural products not enumerated, Animal												
60 Agricultural Implements.												
88 Barley												
Bricks			5,706				5,706		5,708	855 90	0 40	856 30
Bones												
Brimstone				15			15		15	2 25		2 25
Cement and Water Lime.				232			232	4	236	34 80	0 80	35 60
Clay, Lime and Sand.			200				200		200	30 00		30 00
Coal				1,804			1,804		224,131	39,848 00	4,978 20	44,826 20
Corn				118,619			118,619		269,962	53,992 40		53,992 40
Cattle												
Cotton, Raw.												
Crockery and Earthenware.	5		1				6	1	7	0 90	0 20	1 10
Dye Wood and Dye Stuffs.												
Fish			2				172		172	25 80		25 80
Flax and Hemp.												
Flour	10			7,875			10	8,631	8,641	1 50	1,726 20	1,727 70
Furniture			13	57			3	40	53	1 95	8 00	9 95
Gypsum												
Glass, all kinds	1						2		3	0 15	0 40	0 55
Hay, pressed.												
Hogs												
Horses			3				4		8	0 60	0 80	1 40
Hides and Skins, Horns and Hoofs				5			5		5		1 00	1 00
Ice												
Iron, Railway				63			63		63	9 45		9 45
" Pig				1,033			1,053	549	1,602	157 95	109 80	267 75

	89	555	146	514		1	749	556	1,305	112 35	111 20	223 55
" all other										586 30		586 30
Iron Ore			10,522	1,204			11,726		11,726			
Kryolite Chemical Ore and other Ore, except Iron												
Lard and Lard Oil				11		27		38			7 60	7 60
Meal, all kinds				12,768		100		12,868			2,573 60	2,573 60
Meats, other than Pork						17		17			3 40	3 40
Marble				4,697			4,697		4,697	704 55		704 55
Manilla				20			20			3 00		3 00
Molasses				255			255		255	38 25		38 25
Nails	10	58					68		68	10 20		10 20
Oats				19,431					19,431		3,886 20	3,886 20
Oil, in barrels	2	1		33		3	36	3	39	5 40	0 60	6 00
Oil Cake												
Peas												
Potatoes												
Pork					9	498		502			100 40	100 40
Paint	2		421				425		425	63 75		63 75
Pitch and Tar												
Rags												
Rye			295		179	632	295	811	1,106	44 25	162 20	206 45
Rosin												
Salt	12		42				54		54	8 10		8 10
Stone intended for Cutting		1,080										
" wrought						3,657		4,737	4,737		947 40	947 40
" not suitable for Cutting,						127		127	127		25 40	25 40
unwrought												
Seeds, all kinds		1		4,242	615	375	4,242	990	5,232	424 20	99 00	523 20
Sheep				76		5	1	81	82	0 15	16 20	16 35
Soda Ash				33			33		33	4 95		4 95
Steel				554	3		554	3	557	83 10	0 60	83 70
Sugar	5			1,556		2	1,572	2	1,574	235 80	0 40	236 20
Spirits, Beer, &c.		11			169	16	11	190	201	1 65	38 00	39 65
Tobacco, Raw		5										
Tallow				122	1		122	1	123	18 30	0 20	18 50
Tin												
Turpentine												
Wheat		42,930										
White Lead				40,012		48,129		131,071	131,071		26,214 20	26,214 20
Whiting												
Wool				275			275		275	41 25		41 25
All other Goods and Merchandise, not enumerated.				16	68		16	68	84	2 40	13 60	16 00
Bank	146	118	82	19,765	1,609	172	19,993	1,899	21,892	2,998 95	379 80	3,378 75
Barrels												
Barrels, Empty				8	210		8	210	218	1 56	40 54	42 10
Boat Knees												
Floats												
Firewood, in Vessels			300				300		300	20 00		20 00
" Rafts												
Hoops												

No. 6.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, Up.		Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$	cts.			$	cts.
Hop Poles.															
Lumber, Sawn, in Vessels.		1,655				41,892		9,633			69,389		12,463 79		12,463 79
“ “ Rafts.															
Masts, Spars and Telegraph Poles, in Vessels.															
Masts, Spars and Telegraph Poles, in Rafts.															
Railway Ties, in Vessels.															
“ “ Rafts.			375							375			60 00		60 00
Saw Logs.															
Staves and Headings, Barrel.															
“ “ “ West India															
Staves, Salt Barrel.															
Shingles.															
Split Posts and Fence Rails, in Vessels.															
Split Posts and Fence Rails, in Rafts.															
Timber, Square, in Vessels.															
“ “ Rafts.		7,889													
Traverses.															
Woodenware and Wood partly manufactured.															
Total Freight paying Tolls.	282	54,234	17,729	16,209	218,988	245,427	15,603	287,628	252,602	603,498	856,100	58,925 25	103,991 58	3 60	27 20
Free Articles having paid full Tolls on the St. Lawrence Canals.															
Agricultural Products, not enumerated, Vegetable.															
Bricks.			21							21					
Cement and Water Lime.			156							156					
Clay, Lime and Sand.	18		121							139					
			80							80					

Crockery and Earthenware.	10	.....	337	.....	.....	.....	347	.....	.....
Fish .....	.....	.....	9	.....	.....	.....	9	.....	.....
Furniture .....	.....	.....	1	.....	.....	.....	1	.....	.....
Glass, all kinds.	40	.....	95	.....	.....	.....	135	.....	.....
Horses .....	.....	.....	1	.....	.....	.....	1	.....	.....
Iron, Railway	2,853	.....	7,908	.....	.....	.....	10,761	.....	.....
“ Pig	363	.....	126	.....	.....	.....	489	.....	.....
“ all other	57	.....	424	.....	.....	.....	481	.....	.....
Meal, all kinds.	31	.....	31	.....	.....	.....	31	.....	.....
Molasses	5	.....	5	.....	.....	.....	5	.....	.....
Nails	147	.....	407	.....	.....	.....	554	.....	.....
Oil, in Barrels.	6	.....	10	.....	.....	.....	16	.....	.....
Paint	32	.....	21	.....	.....	.....	53	.....	.....
Salt	180	.....	3,878	.....	.....	.....	4,058	.....	.....
Seeds, all kinds.	291	.....	291	.....	.....	.....	291	.....	.....
Soda Ash	142	.....	968	.....	.....	.....	1,110	.....	.....
Sugar	61	.....	26	.....	.....	.....	87	.....	.....
Spirits, Beer, &c.	6	.....	225	.....	.....	.....	231	.....	.....
Tin	3	.....	484	.....	.....	.....	487	.....	.....
Whiting .....	.....	.....	12	.....	.....	.....	12	.....	.....
All other Goods and Merchandise, not enumerated	255	.....	940	.....	.....	.....	1,195	.....	.....
Barrels, Empty .....	.....	.....	2	.....	.....	.....	2	.....	.....
Grand Total, Freight.	4,455	54,234	33,593	16,209	218,988	245,427	272,611	603,498	876,109

Total Tolls on Vessels.....

“ Passengers.....

“ Free Goods.....

Total Through Tolls.....

7,409 38

7,554 93

40 20

59 25

66,374 83

111,605 76

177,980 59

14,964 31

99 45

\$3,112.82

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

APPENDIX A—Continued—CANALS.

No. 7.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the Welland Canal, and the Amount of Tolls collected thereon, during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl												\$ cts.
Apples	233	624							233	624	857	24 72
Agricultural Products, not enumerated, Vegetable	7								7		7	0 14
Agricultural Products, not enumerated, Animal												
Aggricultural Implements												
Barley	52	65		488					52	553	553	26 99
Bricks		19								19	71	2 59
Bones												
Brimstone												
Cement and Water Lime	42	6							42	6	48	4 99
Clay, Lime and Sand	94	876							94	876	970	99 89
Coal	101	350					4,277	932	4,378	1,282	5,660	310 42
Corn												
Cattle												
Cotton, Raw												
Crockery and Earthenware	71	65							71	65	136	2 97
Dye Wood and Dye Stuffs												
Fish	1								1		1	0 02
Flax and Hemp												
Flour		4,737										
Furniture	2								2	4,737	4,737	118 47
Gypsum				715							2	0 20
Glass, all kinds	6									715	715	43 94
Hay, Pressed	18								6		6	0 12
Hogs									18		18	0 40
Horses												
Hides and Skins, Horns and Hoofs												
Ice												
Iron, Railway	30								30		30	0 57
" Pig												

No. 7—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Lumber, sawn, in Vessels.....	1,959	2,888		53			1,959	2,941			4,900	\$ cts. 336 69
“ “ Rafts.....												
Masts, Spars, and Telegraph Poles, in Vessels.....												
Railway Ties, in Vessels.....		25		203						228		16 66
“ “ Rafts.....												
Saw Logs.....	280	1,827	179	3,217		147	606	5,044		82	5,650	206 55
Staves and Headings, Barrel.....				82								8 25
“ “ Pipe.....												
“ “ West India.....												
Staves, Salt Barrel.....												
Shingles.....	4						4				4	0 27
Split Posts and Fence Rails, in Vessels.....												
“ “ Rafts.....												
Timber, Square, in Vessels.....	20						20				20	1 50
“ “ Rafts.....	80						80				80	8 89
Traverses.....												
Woodenware and Wood partly manufactured.....												
Total freight paying Tolls.....	17,936	27,664	179	5,589				22,736		37,250	59,986	2,987 73
Timber passed free from Welland to Port Robinson.....		1,416								1,416	1,416	
Grand Total Freight.....	17,936	29,080	179	5,589				22,736		38,666	61,402	
Total Way Tolls on Vessels.....												1,013 80
“ “ Passengers.....												25 78
“ “ Free Goods.....												\$75 60.
Total Way Tolls.....												4,027 31

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.B. H. TEAKLES,
Chief Clerk, Canal Revenue.

APPENDIX A—Continued—CANALS.

No. 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, and the Amount of Revenue collected during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.	1	69							1	69	70	\$ cts.
Apples	48	1,628							48	1,628	1,676	14 00
Agricultural Products not enumerated, Vegetable	266	382										230 42
Agricultural Products not enumerated, Animal	54	588							287	382	669	65 87
Agricultural Implements.	93	21							54	588	642	84 72
Barley	540	813							93	21	114	14 86
Bricks.	6,356	307			2	343			545	1,156	1,701	61 45
Bones	1	123					968		7,440	307	7,747	327 06
Brimstone.								8	1	710	711	97 96
Cement and Water Lime.	2,319	122										
Clay, Lime and Sand	15,936	5,910	41						2,360	122	2,482	306 46
Coal		59,238	80						18,854	6,050	24,904	994 70
Corn	3,919	3,845	605						605	155,675	156,280	21,345 51
Cattle	34	303							3,919	3,868	7,787	217 17
Cotton, Raw									34	312	346	27 16
Crockery and Earthenware	134	19										
Dye Wood and Dye Stuffs	31	1							563	24	587	115 16
Fish	462	36			8				219	1	220	13 64
Flax and Hemp					10				471	36	507	56 36
Flour	654	2,553			17						10	0 73
Furniture	186	434							671	2,613	3,284	383 57
Gypsum	2,665	393							187	434	621	99 59
Glass, all kinds.	439	48							2,665	533	3,198	83 15
Hay, Pressed	1,263	321							2,473	50	523	97 74
Hogs	5	21			61				1,324	321	1,645	84 17
Horses	77	264							5	21	26	3 20
Hides and Skins, Horns and Hoofs	10	12							78	264	342	26 65
Ice									11	12	23	3 11
Iron, Railway	11,340	727	75						11,415	727	12,142	1,701 02

No. 8.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Continued.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Iron, Pig.....	4,640	43							4,766	53	4,819	\$ cts.
" all other.....	12,342	1,448	126		6	10		28	12,601	1,476	14,077	702 72
Iron Ore.....												767 99
Kryolite, Chemical Ore and other Ore, except Iron.....		1,094										
Lard and Lard Oil.....	96	61							96	64	1,094	54 70
Meal, all kinds.....	45	695							45	695	740	17 63
Meats, other than Pork.....	14	26					2		14	28	42	39 45
Marble.....	13	2							13	2	15	3 77
Manilla.....	16								16		16	2 75
Molasses.....	553	56	5						56		2,803	3 20
Nails.....	2,144	789	366				2,180		2,747	56	2,803	184 71
Oats.....	416	1,241			5				2,510	789	3,299	526 41
Oil, in barrels.....	740	215	11		3	52	470		1,241	1,241	1,662	97 02
Oil Cake.....	1	13							1,224	207	1,491	166 18
Pease.....	457	20,753							1	13	14	0 69
Potatoes.....	3	258							457	20,753	21,210	435 34
Pork.....	205	226							3	258	261	18 74
Paint.....	225	149	17				17	8	234	234	439	33 28
Pitch and Tar.....	206	151	1				1,152		259	149	408	60 78
Rags.....	208	175							1,359	151	1,510	108 13
Rye.....		7							208	175	383	41 65
Rosin.....	44	55								7	7	1 05
Salt.....	2,663	8	1,752			4	1,853		1,897	55	1,952	104 23
Stone intended for Cutting.....	1,503	1,060	2,148				850		4,415	12	4,427	548 45
" wrought.....	326	2					4		4,301	1,060	5,561	527 87
" not suitable for Cutting, un wrought.....									330	2	332	19 29
Seeds, all kinds.....	254	5,305				135						161 70
Sheep.....	6,566	1,309	359				1	3	254	5,440	5,694	161 70
Soda Ash.....	3	120							6,312	1,312	8,238	361 05
Steel.....	602	6	1,099				5		130	130	123	11 89
Sugar.....	196	35	33						1,706	6	1,712	338 61
Spirits, Beer, &c.....	3,347	231	228						1,196	6	2,022	31 01
	430								7,339	35	7,374	831 08
									658	242	900	103 69

Tobacco, Raw.....	28	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						</
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No. 8.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Free Articles having paid Tolls on the Welland Canal.												
Ashes.		80								80	80	
Corn.		138,481								138,481	138,481	
Cement and Water Lime.		29								29	29	
Clay, Lime and Sand.		4,861					80			80	4,861	
Flour.		2								2	2	
Furniture.		2								2	2	
Glass.		3								3	3	
Horses.		138								138	138	
Iron, all other.		19								19	19	
Lard and Lard Oil.		100								100	100	
Meals, all kinds.		13								13	13	
Meats do.		358						43		401	401	
Pork.		4								4	4	
Seeds, all kinds.												
Stone for Cutting.	1,250								1,250		1,250	
Wheat.		81,946								81,946	81,946	
Whiskey, Spirits, &c.		14								14	14	
Merchandise.	20	173							20	173	193	
Lumber, in Vessels.	268	3,840						1,127	268	4,967	5,235	
“ Rafts.		1,297								1,297	1,297	
Staves, barrel.		6								6	6	
“ pipe.		311								311	311	
“ West India.		1,080								1,080	1,080	
“ salt barrel.		1								1	1	
Timber, square, Rafts.		11,510								11,510	11,510	
Woodenware.		1								1	1	
Coal, per Order in Council, Free.	58,418						49,793		108,211		108,211	
	204,560	462,695	9,776	1,031	4,752	2,807	60,987	96,608	280,075	563,141	843,216	

Total Tolls on Vessels.....	13,889 15
“ “ Passengers.....	2,384 23
“ “ Free Goods.....	136 00
“ “ Fines and Damages.....	5,718 05
“ “ Wharfage and Storage.....	11,071 57
Other Receipts.....	
Total Revenue, exclusive of Hydraulic Rents.....	72,442 88

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

APPENDIX A—Continued—CANALS.

No. 9.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the St. Lawrence Canals, and the Amount of Tolls collected thereon, during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls Up.	Amount of Tolls Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
Ashes, Pot and Pearl	1	65							1	65	66	0 20	13 00	13 20
Apples		1,461								1,461	1,461		219 15	219 15
Agricultural Products not enumerated, Vegetable	205	69	21						226	69	295	33 90	10 35	44 25
Agricultural Products not enumerated, Animal	1	509							1	509	510	0 15	76 35	76 50
Agricultural Implements		20								20	20		4 00	4 00
Barley														
Bricks	122		116					8	238		238	35 70		35 70
Bones		107								115	115		17 25	17 25
Brimstone														
Cement and Water Lime	1,575	3	41				1,616	3	1,619			242 40	0 45	242 85
Clay, Lime and Sand	85	100	80			40	165	140	305			24 75	21 00	45 75
Coal		57,596				75,407			133,003				19,916 85	19,916 85
Corn		889							889				17 91	17 91
Cattle	1	34		9			1	43	44			0 15	6 45	6 60
Cotton, Raw														
Crockery and Earthenware	81	18	427			5	508	23	531			101 60	4 60	106 20
Dye Wood and Dye Stuffs	10						10		10			2 00		2 00
Fish	208	3	1		8		217	3	220			32 55	0 45	33 00
Flax and Hemp														
Flour		2,140						2,140	2,140				321 00	321 00
Furniture	50	323	1				51	323	374			10 20	64 60	74 80
Gypsum	3						3		3			0 45	0 45	0 45
Glass, all kinds.	417	6	33			2	450	8	458				1 60	91 60
Hay, Pressed	110						110		110			16 50		16 50
Hogs		19						19	19				2 85	2 85
Horses	14	36	1				15	36	51			2 25	5 40	7 65
Hides and Skins, Horns and Hoofs	9	8	1				10	8	18			1 50	1 20	2 70
Ice														
Iron, Railway	10,984		75				11,059		11,059			1,658 85		1,658 85
" Pig	4,335		126				4,461		4,461			669 15		669 15

	1,495	55	253				1,748	55	1,803	262 20	8 25	270 45
" all other												
Iron Ore												
Kryolite, Chemical Ore and other Ore, except Iron		1,092						1,092	1,092	8 85	54 60	54 60
Lard and Lard Oil	59	27					56	27	86	0 15	4 05	12 90
Meal, all kinds	1	47					1	47	48		7 05	7 20
Meats, other than Pork		10					2	12	12		1 80	1 80
Marble	8											
Manilla	16						8					
Molasses	90		5				16		16	1 60	1 60	3 20
Nails	1,720	5	366				95		16	3 20		19 00
Oats		7							95	19 00		3 20
Oil (in Barrels)	323	92	11				2,086	5	2,091	417 20	1 00	418 20
Oil Cake							334	7	7		1 05	1 05
Pease		2,934						92	426	66 80	18 40	85 20
Potatoes	3	7					3	2,934	2,934		67 91	67 91
Pork		41						7	10	0 45	1 05	1 50
Paint	197	38	17			2	214	43	43		6 45	6 45
Pitch and Tar	78	90	1				79	38	252	42 80	7 60	50 40
Rags	1	61					1	90	169	15 80	18 00	33 80
Rye		7						61	62	0 20	12 20	12 40
Rosin	42							7	7		1 05	1 05
Salt	450		1,752				42		42	8 40	8 40	8 40
Stone intended for Cutting	691	3	2,148				2,202		2,202	330 30		330 30
" wrought	17						2,839	3	2,842	425 85	0 45	426 30
" not suitable for Cutting, unwrought							17		17	3 40		3 40
Seeds, all kinds	66											
Sheep		785						785	785		63 60	63 60
Soda Ash	562	9	359				425	9	434	63 75	1 35	65 10
Steel	185	1						32	32		4 80	4 80
Sugar	2,531	1	1,099				1,661	1	1,662	332 20	0 20	332 40
Spirits, Beer, &c.	200	18	33				185	1	186	29 00	0 20	29 20
Tobacco, Raw		208	228			7	2,564	18	2,582	512 80	3 60	516 40
Tallow	22	2				3	428	215	643	85 60	43 00	128 60
Tin	142	3	486					5	5		0 75	0 75
Turnipentine	18							2	24	3 30	0 30	3 60
Wheat		346					628	3	631	125 60	0 60	126 20
White Lead	55	3					18		18	3 60		3 60
Whiting	434					1		346	346		6 92	6 92
Wool	1	1					55	4	59	11 00	0 80	11 80
All other Goods and Merchandise not enumerated	3,210	1,288	887			55	434	1	434	86 80		86 80
Bark							1		2	0 15	0 15	0 30
Barrels, Empty	3	1	5				8	1	9	1 38	0 20	1 58
Boat Knees												
Floats												
Firewood, in Vessels	2,400						2,400		2,400	160 00		160 00
" Rafts												
Hoops												

[illegible]

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued—CANALS.

No. 10.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, and the Amount of Tolls collected thereon during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.	48	4							48	4	4	\$ cts. 0 80 11 27
Apples.		167								167	215	
Agricultural products not enumerated, Vegetable.	61	313							61	313	374	21 62
Agricultural products not enumerated, Animal.	53	79							53	79	132	8 22
Agricultural Implements.	93	1							93	1	94	10 86
Barley.	540	813		343	2				545	1,156	1,701	61 95
Bricks.	6,234	307					968		7,202	307	7,509	291 36
Bones.	1	16		579					1	595	596	80 71
Cement and Water Lime.	744	119							744	119	863	63 61
Clay, Lime and Sand.	15,851	5,810					2,838	100	18,689	5,910	24,599	948 95
Coal.		1,042	605			1,287	19,743		605	22,372	23,277	1,428 65
Com.	3,919	2,956				23			3,919	2,979	6,898	199 26
Cattle.	33	269							33	269	302	20 56
Crocery and Earthenware.	53	1					2		53	1	56	8 96
Dye Wood and Dye Stuffs.	21	1					188		209	1	210	11 64
Fish.	254	33							254	33	287	23 36
Flax and Hemp.					10						10	0 75
Flour.	654	413			17	60			671	473	1,144	62 57
Furniture.	136	111							136	111	247	24 79
Gypsum.	2,662	393				140			2,662	533	3,195	82 70
Glass, all kinds.	22	42					1		23	42	65	6 14
Hay, pressed.	1,153	321			61				1,214	321	1,535	67 67
Hogs.	5	2							5	2	7	0 35
Horses.	63	228							63	228	291	18 40
Hides and Skins, Horns and Hoofs.	1	4								4	5	0 41
Iron, Railway.	356	727							356	727	1,083	42 17
" Pig.	305	43				10			305	53	358	33 57
" all other.	10,847	1,393			6			28	10,853	1,421	12,274	497 54
Kryolite Chemical Ore and other Ore, except Iron.		2								2	2	0 10
Lard and Lard Oil.	37	37							37	37	74	4 73
Meal, all kinds.	44	648							44	648	692	32 25

No. 10.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Staves and Headings, Barrel		116								116	116	\$ 3 63
" " Pipe												
" " West India	20	712							20	712	732	26 86
Staves, salt barrel												
Shingles	20	36			3				28	36	59	12 75
Split Posts and Fence	9	2		10					19	2	21	4 40
" Rafts												
Timber square, in Vessels.	444	2,442							444	2,462	2,906	37 86
" Rafts.	413	3,800							413	3,800	4,213	103 84
Traverses.		11,612								11,612	11,612	30 23
Woodenware and Wood partly manufactured.	64	14							64	14	78	13 10
Total Freight paying Tolls.	110,443	136,683	1,203	1,364	1,635	2,255	14,223	19,905	127,504	160,207	287,711	10,026 22
Coal, Free, per Order in Council	51,827						49,793		101,620		101,620	
Stone " "	1,250								1,250		1,250	
Corn " "		5,308								5,308	5,308	
Cement and Water Lime, Free, per O. in C.		29								29	29	
Clay, Lime and Sand						80			80		80	
Merchandise " "	20								20		20	
Lumber " "	268	167							268	167	435	
Grand Total Way Freight	163,808	142,187	1,203	1,364	1,635	2,255	64,096	19,905	230,742	165,711	396,453	
Total Way Tolls.												16,636 43
Total Way Tolls on Vessels.												5,749 73
" " Passengers.												920 48
" " Free Goods.												\$5,024 46

B. H. TEAKLES,
Chief Clerk Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued.—CANALS.

No. 11.—GENERAL STATEMENT showing the Quantity of each Article of Freight transported on the Ottawa Canals, and the Amount of Revenue collected during the Fiscal Year ended 30th June, 1889.

ARTICLES	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl		46						46	46	\$ 8 74
Apples	10	37					10	37	47	2 60
Agricultural Products, not enumerated, Vegetable		56						56	56	3 39
Agricultural Products, not enumerated, Animal		1,597						1,597	1,597	144 89
Agri-cultural Implements	4	16					4	16	20	2 93
Barley		708						708	708	47 35
Bricks	3	110					3	110	113	6 39
Bones		18						18	18	1 60
Brinestone										
Cement and Wader Lime	3	28					3	28	31	2 63
Clay, Lime and Sand		7,832						7,832	7,832	203 88
Coal		327						327	327	10 90
Corn										
Cattle		558						558	558	35 18
Cotton, Raw										
Crockery and Earthenware										
Dye Wood and Dye Stuffs	2						2		2	0 19
Fish										
Flax and Hemp										
Flour		27						27	27	1 19
Furniture	11	42					11	42	53	6 89
Gypsum										
Glass, all kinds.										
Hay, Pressed	5	646						646	651	57 20
Hogs		88						88	88	6 31
Horses		235						235	235	13 38
Hides and Skins, Horns and Hoofs.	20	36					20	36	36	3 36
Ice										
Iron, Railway	5							5	5	0 30
" Pig										

No. 11.—GENERAL STATEMENT showing the Quantity of each Article of Freight transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Iron all other.	19	37							19	37	56	\$ 3 76
Kyrolite Chemical Ore and other Ore, except Iron												
Lard and Lard Oil		1,444								1,444	1,444	72 20
Meal, all kinds		6								6	6	0 59
Meats, other than Pork		39								39	7	0 69
Molasses	2	2							2	2	39	3 83
Nails	3								3		4	0 58
Oats		696								696	3	0 30
Oil	4	8							4	8	696	45 45
Oil Cake											12	1 45
Pease		1,504								1,504	1,504	108 36
Potatoes	2	494							2	494	496	34 08
Pork	4	41							4	41	45	3 39
Paint												
Pitch and Tar												
Rags		48								48	48	8 57
Rye	1								1		1	0 10
Rosin												
Salt	5								5		5	0 20
Stone intended for Cutting		4								4	4	0 34
“ wrought												
“ not suitable for Cutting, unwrought												
Seeds, all kinds		18								18	18	1 78
Sheep		393								393	393	27 63
Sugar	4	5							4	5	9	1 35
Spirits, Beer, &c.	1								1		1	0 19
Tobacco, Raw												
Tallow		69								69	69	4 51
Tin	1									1	1	0 19
Turpentine												
Wheat		29								29	29	2 78
White Lead	2								2		2	0 38
Whiting												
Wool	1									1	1	0 10

All other Goods and Merchandise not enumerated.	61	286						61	286	347	47 05
Bark									66		8 06
Barrels, Empty										17,600	250 46
Boat Knees										61,854	2,454 43
Floats										6,816	93 16
Firewood, in Vessels.										14	1 19
Rafts.											
Hoops											
Hop Poles											
Lumber, Sawn, in Vessels	2	394,695						2	550,470	550,472	43,773 50
Rafts									3,904	3,904	46 49
Masts, Spars and Telegraph Poles, in Vessels.											
Rafts.											
Railway "Ties, in Vessels.											
Rafts.											
Saw Logs									1,705	1,705	164 60
Staves and Headings, Barrel									1,718	1,718	161 27
Shingles									10,382	10,382	237 26
Split Posts and Fence Rails, in Vessels.									1	1	0 15
Rafts									548	548	415 48
Timber, "Square, in Vessels											
Rafts									11	11	2 32
Traverses											
Woodenware and Wood partly manufactured.	3	4,570							4,570	4,570	76 32
									80	80	0 50
										3	0 60
Total Freight paying Tolls.	172	518,266						172	677,342	677,514	48,615 14
Floats, Free, per O.C.									17,587	17,587	
Lumber, Sawn, in Rafts, Free, per O.C.									1,496	1,496	
Saw Logs									2,275	2,275	
Timber, Square									6,240	6,240	
Traverses									20	20	
Grand Total Freight	172	545,884						172	704,960	705,132	
Total Tolls on Vessels.											
Passengers.											
Free Goods.											
Fines											
Total Revenue, exclusive of Hydraulic Rents											
53,639 03											

B. H. TEAKLES,
Chief Clerk Canal Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A.—Continued—CANALS.

No. 12.—GENERAL STATEMENT showing the Quantity of each Article transported on the Chambly Canal and the Amount of Revenue collected, during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.												\$ cts.
Apples.											709	58 05
Agricultural Products not enumerated.		622						87				
Vegetable.	12	206							12	206	218	7 27
Animal.	9	30							9	30	39	1 30
Agricultural Implements.										9	9	0 90
Barley.			373						373		373	30 64
Bricks.	271						3,493		271	3,493	3,764	362 34
Bones.			277						277		277	27 70
Brinstone.							16			16	16	1 60
Cement and Water Lime.												
Clay, Lime and Sand.	243						4,424		243	4,424	4,667	482 36
Coal.							120,104			120,104	120,104	11,723 82
Corn.												
Cattle.		48								48	48	1 60
Cotton, Raw.												
Crockery and Earthenware.												
Dye Wood and Dye Stuffs.	3	10					133		3	133	136	13 30
Fish.												
Flax and Hemp.												
Flour.	324	11							324	11	335	11 38
Furniture.	27						1		27	1	28	1 00
Gypsum.												
Glass, all kinds.												
Hay, Pressed.	146	1,325					622					
Hogs.												
Horses.												
Hides and Skins, Horns and Hoofs.		21								21	21	0 70
Ice.		3								3	3	0 10
Iron, Railway.												
									768	1,325	2,093	109 13

No. 12.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, \$ cts.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hop Poles.....	4,492	1,261							82,142	10,527	92,669	5,424 17
Lumber, Sawm, in Vessels.....	9		77,650	8,886			380		9		9	3 34
Masts, Spars, and Telegraph Poles in Vessels.....												
Railway Ties in Vessels.....	3,739	750							4,259	3,825	8,084	645 26
Shingles.....	59		28	3,075					87		87	12 34
Split Posts and Fence Rails, in Vessels.....												
Timber, Square, in Vessels.....												
Traverses.....	126								126		126	12 59
Woodenware and Wood partly manufactured.....	14								14		14	0 24
Total Freight paying Tolls.....	10,539	6,190	80,380	11,961			141,268		90,919	159,419	250,338	20,346 34
Coal, Free, per O. C.....	307						307		307		307	
(Grand Total Freight.....	10,846	6,190	80,380	11,961			141,268		91,226	159,419	250,645	
Total Tolls on Vessels.....												2,862 01
do Passengers.....												62 08
do Free Goods.....												\$30 70
Wharfage and Storage.....												
Fines and damages.....												15 00
Other receipts.....												
Total Revenue, exclusive of Hydraulic Rents.....												23,285 43

DEPARTMENT OF RAILWAY AND CANALS,
OTTAWA, 30th November, 1886.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX A—Continued—CANALS.

No. 13.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal, and the Amount of Revenue collected during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.												
Apples.		31								31	31	7 40
Agricultural products not enumerated, Vegetable.		59								59	59	2 48
Agricultural products not enumerated, Animal												
[1] Agricultural Implements.	18								18		18	0 48
20 Barley	152	575							152	575	727	35 01
30 Beans	35	78							35	78	113	12 82
39 Bricks	276								276		276	6 52
Bones.	308	145							308	145	453	11 19
Brinestone	4	28							4	28	32	1 32
Cement and Water Lime	127	19							127	19	146	4 28
Clay, Lime and Sand.	18	6							18	6	24	0 58
Coal.		11,976								11,976	11,976	535 17
Corn.		62								62	62	2 04
Cattle.	4								4		4	0 11
Cotton, Raw.	17	3							17	3	20	2 58
Crockery and Earthenware.		2								2	2	0 18
Dye Wood and Dye Stuffs.		7								7	173	4 18
Fish.	166								166			
Flax and Hemp												
Flour.	45	325							45	325	374	11 13
Furniture	29	19							29	19	48	4 90
Gypsum												
Glass, all kinds.	10	3							10	3	13	1 16
Hay, pressed.	295	21							295	21	316	14 16
Hogs												
Horses	4	9							4	9	13	0 37
Hides and Skins.	1	8							1	8	9	0 26
Horns and Hoofs.												
Ice.												
Iron, Railway	1											
" Pig.	321										321	0 05
" " all other.	252	21							321	21	342	9 63
									252		273	7 32

ARTICLES.	From Canadian to Canadian Ports.		From Canadian United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Kryolite, Chemical Ore and other Ore, except Iron.....		1,202					60	1,202	1,262	63 10
Lard and Lard Oil.....	20						20	2	22	0 61
Mead, all kinds.....	53						33	9	42	1 08
Meats, other than Pork.....	1						1	2	3	0 08
Marble.....	11						11	5	16	1 42
Manilla.....										
Molasses.....	88						88	7	95	8 42
Nails.....	210						210	1	211	18 85
Oats.....	1						1	2	3	0 09
Oils, in Barrels.....	50	100					50	100	150	14 28
Oil Cake.....		6						6	6	0 18
Pease.....	8						8	3	11	0 29
Potatoes.....	77	24					77	24	101	2 58
Pork.....	50	42					50	42	92	2 72
Paint.....	5						5		5	0 45
Pitch and Tar.....	13						13		13	1 14
Rags.....	1	16					1	16	17	2 37
Rye.....	15						15		15	0 37
Rosin.....										
Salt.....	727	152					727	152	879	31 08
Stone intended for Cutting.....	479	448					479	448	927	32 45
“ wrought.....	1						1		1	0 18
“ not suitable for Cutting, unwrought.....	143	1,152					143	1,152	1,295	30 60
Seeds, all kinds.....	33						33		35	0 91
Sheep.....	4	2					4	2	6	0 16
Soda Ash.....	25						25		25	2 18
Steel.....	2						2		2	0 05
Sugar.....	422	36					422	36	458	43 23
Spirits, Beer, &c.....	100	22					100	22	122	11 06
Tobacco, Raw.....	1						1		1	0 03
Tallow.....	1						1		1	0 03
Tin.....	10						10		10	1 07
Turpentine.....										
Wheat.....	9	229					9	229	238	6 18

APPENDIX A.—Continued—CANALS.

No. 14.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal, and the Amount of Revenue collected, during the Fiscal Year ended 30th June, 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Fish.....	41	96							41	996	1,037	\$ cts.
Flour.....	1,601	391							1,601	391	1,992	10 37
Coal.....	2,281	21,304							2,281	21,464	23,745	19 92
Lumber.....	3,895	1,398		160					3,895	1,398	5,293	237 45
Other Agricultural Products.....	7,535	5,826							7,535	5,826	13,361	52 93
Other Merchandise.....	1,251	255							1,251	255	1,506	133 61
Total Freight paying Tolls.....	16,604	30,170		160					16,604	30,330	46,934	15 06
												469 34
Tolls on Vessels.....												2,041 16
Total Revenue.....												2,510 50

DEPARTMENT OF RAILWAY AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

APPENDIX A.—Continued—CANALS.

No 15—GENERAL STATEMENT showing the Quantity of each Article transported on the Trent Valley Canals, and the Amount of Revenue collected during the Fiscal Year ended 30th June, 1889.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
All other Goods and Merchandise not enumerated	1								1		1	\$ 0 03
Bark												
Firewood, in Vessels	12,897								12,897		12,897	133 47
Lumber, Sawm, in Vessels	449								449		449	3 23
Railway Ties, in Vessels	141								141		141	4 81
Rafts												
Saw Logs	1,225								1,225		1,225	24 60
Staves, Salt Barrel	74								74		74	9 41
Shingles												
Split Posts and Fence Rails, in Vessels												
Rafts												
Timber, Square, in Vessels	505	200							505	200	705	14 25
Rafts												
Traverses												
Woodenware and Wood partly manufactured.	661								661		661	4 40
Stone, unwrought												
Total Freight paying Tolls	15,953	200							15,953	200	16,153	194 20
Tolls on Vessels												
" Passengers												
Total Revenue, exclusive of Hydraulic Rents												
											16,153	194 20
											57 75	7 77
											259 72	

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A.—

No. 16.—STATEMENT of Traffic on the undermentioned Canals and the

ARTICLES.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 1.</i>		\$ cts.		\$ cts.		\$ cts.
Canadian Vessels, steam.....	266,065	3,705 54	606,226	3,640 77	58,826	195 07
United States Vessels, steam....	252,706	3,795 32	18,218	129 45	529	7 19
Canadian Vessels, sail.....	261,477	4,926 18	867,135	9,433 80	57,364	938 85
United States Vessels, sail.....	158,787	3,551 07	84,359	685 13	132,648	1,720 90
Total, Class No. 1.....	939,035	15,978 11	1,575,938	13,889 15	249,367	2,862 01
<i>Class No. 2.</i>	No.		No.		No.	
Passengers.....	3,071	125 23	48,242	2,384 23	3,713	62 08
<i>Class No. 3.</i>	Tons.		Tons.		Tons.	
Bricks.....	71	2 59	7,747	327 06	3,764	362 34
Brimstone.....	15	2 25			16	1 60
Cement and Water Lime.....	284	40 59	2,482	306 46		
Clay, Lime and Sand.....	1,170	129 89	24,904	994 70	4,667	482 56
Fish.....	173	25 82	507	56 36		
Gypsum.....	715	43 94	3,198	83 15		
Iron, Railway.....	93	10 02	12,142	1,701 02		
“ Pig.....	1,602	267 75	4,819	702 72		
“ all other.....	1,343	224 29	14,077	767 99	25	2 50
Salt.....	294	13 35	4,427	548 45	436	37 48
Steel.....			30	4 50		
Stone, for cutting.....	4,737	947 40	5,561	527 87	1,027	96 04
Apples.....	902	33 72	1,676	230 42	709	58 05
Barley.....	6,261	883 29	1,701	61 95	373	30 64
Corn.....	269,962	53,992 40	7,787	217 17		
Cotton, Raw.....			10	0 75		
Flax and Hemp.....			3,284	383 57	335	11 38
Flour.....	13,378	1,846 17	1,645	84 17	2,093	109 13
Hay, Pressed.....	18	0 40	740	39 45		
Meals, all kinds.....	13,112	2,584 96	14	0 59		
Oil Cake.....			1,662	97 02	1,104	36 83
Oats.....	19,703	3,940 60	21,210	435 34	192	7 55
Pease.....	708	70 80	261	18 74		
Potatoes.....			7	1 05	9	0 30
Rye.....	1,106	206 45	8,238	361 05	6	0 20
Seeds, all kinds.....	84	16 39	8	0 87	3	0 30
Tobacco, Raw.....			15,685	315 01	3	0 10
Wheat.....	142,740	26,918 15				
All other Agricultural Products, Vegetable.....	7	0 14	669	65 87	218	7 27
Bones.....			711	97 96	277	27 70
Cattle.....			346	27 16	48	1 60
Hogs.....			26	3 20		
Hides and Skins, Horns and Hoofs.....	5	1 00	23	3 11	3	0 10
Horses.....	8	1 40	342	26 05	21	0 70
Lard and Lard Oil.....	38	7 60	160	17 63		
Meats, other than Pork.....	17	3 40	42	3 77		
Pork.....	502	100 40	439	33 28	6	0 20
Sheep.....			123	11 89	114	3 80
Tallow.....	123	18 50	230	11 36	53	5 30

Continued—CANALS.

Amount of Tolls collected, during the Fiscal Year ended 30th June, 1889.

Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.
169,302	669 49	69,008	719 38	17,517	350 34	3,504	53 75
208,125	2,941 51	562	14 61	84,288	1,685 76	610	4 00
53,271	1,222 76	97,069	1,107 73	253	5 06		
430,698	4,833 76	17,936	240 65				
		184,575	2,082 37	102,058	2,041 16	4,114	57 75
No.		No.		No.		No.	
14,248	188 73	3,527	100 22			777	7 77
Tons.		Tons.		Tons.		Tons.	
113	6 39	453	11 19				
31	2 63	146	4 28				
7,832	203 88	24	0 58				
		173	4 18	1,037	10 37		
		1	0 05				
5	0 30	321	9 63				
56	3 76	273	7 32				
5	0 20	879	31 08				
4	0 34	927	32 45				
47	2 60	59	2 48				
708	47 35	276	6 52				
		62	2 04				
27	1 19	374	11 13	1,992	19 92		
651	57 20	316	14 16				
7	0 69	42	1 08				
		6	0 18				
696	45 45	3	0 09				
1,504	108 36	11	0 29				
496	34 08	101	2 58				
1	0 10	15	0 37				
18	1 78	35	0 91				
		1	0 03				
29	2 78	238	6 18				
56	3 39	18	0 48	13,361	133 61		
18	1 60	32	1 32				
558	35 18	4	11 00				
88	6 31						
36	3 36	9	0 26				
255	13 58	13	0 37				
6	0 59	22	0 61				
39	3 83	3	0 08				
45	3 39	92	2 72				
393	27 93		0 16				
69	4 51	1	0 03				

No. 16.—STATEMENT of Traffic on the undermentioned

ARTICLES.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 3—Concluded.</i>		\$ cts.		\$ cts.		\$ cts.
Wool.....	84	16 00	3	0 34		
All other Agricultural Products, Animal.....			642	84 72	39	1 30
Total, Class No. 3.....	479,254	92,349 66	147,578	8,653 77	15,541	1,284 97
<i>Class No 4.</i>						
Ashes, Pot and Pearl.....	84	16 75	70	14 00		
Agricultural Implements.....			114	14 86	9	0 90
Crockery and Earthenware.....	143	4 07	587	115 16	10	1 00
Dye Woods and Dye Stuffs.....			220	13 64	136	13 30
Furniture.....	55	10 15	621	99 59	28	1 00
Glass, all kinds.....	9	0 67	523	97 74		
Marble.....	4,697	704 55	15	2 75		
Manilla.....	20	3 00	16	3 20		
Molasses.....	268	38 54	2,803	184 71	2,243	219 44
Nails.....	183	12 41	3,299	526 41	3	0 10
Oil, in Barrels.....	282	12 57	1,491	166 18	547	52 98
Paint.....	453	64 30	408	60 78	12	1 20
Pitch and Tar.....			1,510	108 13	890	89 00
Rags.....			383	41 65		
Rosin.....			1,952	104 23	2,117	211 70
Soda Ash.....	403	13 05	1,712	338 61		
Steel.....	559	83 74	172	26 51	12	0 40
Sugar.....	1,754	239 65	7,374	851 08	3,758	375 40
Stone, wrought.....	300	55 68	332	19 29		
Tin.....	30	0 57	801	143 57		
Turpentine.....			374	21 50	342	34 20
White Lead.....	2	0 04	93	14 70	3	0 10
Whiting.....	275	41 25	458	90 02		
Whiskey and all other spirits.....	253	42 38	900	163 69		
Merchandise, not enumerated....	22,595	3,394 68	10,750	1,634 12	2,481	194 68
Total, Class No. 4.....	32,365	4,738 05	36,978	4,856 12	12,591	1,195 40
<i>Class No. 5.</i>						
Bark.....						
Barrels, Empty.....	341	45 15	227	19 71		
Boat Knees.....						
Floats.....	429	5 09	4,694	82 32	333	18 21
Firewood, in Vessels.....	17,922	753 34	10,543	357 79	780	26 00
“ Rafts.....			186	3 89		
Lumber, Sawn, in Vessels.....	74,289	12,800 48	52,975	2,184 48	92,669	5,424 17
“ Rafts.....			74	4 07	9	3 34
Hoops.....			10	1 10		
Railway Ties, in Vessels.....	603	76 66	3,693	90 27	8,084	645 26
“ Rafts.....						
Masts, Spars and Telegraph Poles, in Vessels.....						
Masts, Spars and Telegraph Poles, in Rafts.....			24,897	623 10		
Square Timber, in Vessels.....	54,319	8,145 94	2,978	41 46		
“ Rafts.....	80	8 89	4,213	103 84	126	12 59
Woodenware and Wood partly manufactured.....	68	27 20	107	24 70		
Shingles.....	23	13 77	59	12 75	87	12 34
Split Posts and Fence Rails, in Vessels.....			21	4 40		

Canals, and the Amount of Tolls collected, &c.—*Continued.*

Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.
1	0 10	5	0 13				
1,597	144 59	727	35 01				
15,391	767 44	5,668	190 08	16,390	163 90		
46	8 74	31	7 40				
20	2 93	113	12 82				
		20	2 58				
2	0 19	2	0 18				
53	6 89	48	4 90				
		13	1 16				
		16	1 42				
4	0 58	95	8 42				
3	0 30	211	18 85				
12	1 45	150	14 28				
		5	0 45				
		13	1 14				
48	8 57	17	2 37				
		25	2 18				
		2	0 05				
9	1 35	458	43 23				
		1	0 18				
1	0 19	10	1 07				
2	0 38	7	0 63				
		16	1 40				
1	0 19	122	11 06				
347	47 05	979	125 10	1,506	15 06	1	0 03
548	78 81	2,354	260 87	1,506	15 06	1	0 03
		83	3 77				
66	8 06	20	1 54				
17,600	250 46	830	14 53				
61,854	2,454 43	22,676	418 38			12,897	133 47
6,816	93 16						
550,472	43,773 50	59,390	2,289 04	5,293	52 93	449	3 23
3,964	46 49	22	1 08				
14	1 19						
1,705	164 60	6,889	785 17			141	4 81
1,718	161 27						
		519	41 52				
4,570	76 32	220	6 36			705	14 25
3	0 69	7	1 20				
548	415 48	44	7 20			74	9 41
		20	3 08				

No. 16.—STATEMENT of Traffic on the undermentioned

ARTICLES.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 5—Concluded.</i>		\$ cts.		\$ cts.		\$ cts.
Split Posts and Fence Rails, in Rafts						
Saw Logs	5,650	206 55	22,843	522 45		
Staves and Headings, Barrel	87	9 05	61	6 30		
“ “ Pipe	757	141 43	117	3 88		
“ “ West India	1,194	223 32	1,014	55 34		
“ “ Salt Barrel	2	0 15				
Traverses			11,612	30 23	14	0 24
Hop Poles						
Total, Class No. 5	155,764	22,457 02	140,324	4,172 08	102,102	6,142 15
<i>Special Class.</i>						
Coal	229,791	45,136 62	156,280	21,345 51	120,104	11,723 82
Kryolite or Chemical Ore			1,094	54 70		
Iron Ore	11,726	586 30				
Stone, unwrought, not suitable for cutting	7,185	636 91	5,694	161 70		
Ice						
Total, Special Class	248,702	46,359 83	163,068	21,561 91	120,104	11,723 82
Total Freight and Tolls	916,086	182,007 90	487,948	55,517 26	250,338	23,270 43
Timber and other Wood, Free	1,416	75 60	19,441	2,195 64		
Wheat, Corn, Flour, Iron, Salt, Coal, &c., &c., Free	20,752	3,112 82	335,827	11,187 86	307	30 70
Grand Totals, Passengers and Tonnage of Vessels not included	938,254	185,196 32	843,216	68,900 76	250,645	23,301 13

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

Canals and the Amount of Tolls collected, &c.—*Continued.*

Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.
11	2 32						
10,382	237 26	676	15 42			1,225	24 60
1	0 15	1	0 02				
80	0 50	261	4 52				
		62	9 00				
659,804	47,685 79	91,720	3,601 83	5,293	52 93	15,491	189 77
327	10 90	11,976	535 17	23,745	237 45		
1,444	72 20	1,262	63 10				
		1,295	30 60			661	4 40
1,771	83 10	14,533	628 87	23,745	237 45	661	4 40
677,514	53,637 63	114,275	6,864 24	46,934	2,510 50	16,153	259 72
27,618	343 37						
		2,096	55 94				
705,132	53,981 00	116,371	6,920 18	46,934	2,510 50	16,153	259 72

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX A—

No. 17.—SUMMARY STATEMENT of Traffic on the undermentioned Canals
of each description of Property passed through

ARTICLES.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
Vessels of all kinds.....	939,035	15,978 11	1,575,938	13,889 15	249,367	2,862 01
	No.		No.		No.	
Passengers	3,071	125 23	48,242	2,384 23	3,713	62 08
<i>Forest, Produce of Wood.</i>	Tons.		Tons.		Tons.	
Bark						
Boat Knees.....						
Floats.....	429	5 09	4,694	82 32	333	18 21
do	Free					
Firewood	17,922	753 34	10,729	361 68	780	26 00
Hoops and Hop Poles.....			10	1 10		
Lumber, sawed	74,289	12,800 48	53,049	2,188 55	92,678	5,427 51
do	Free		6,532			
Masts, Spars, &c			24,897	623 10		
Railway Ties.....	603	76 66	3,693	90 27	8,084	645 26
Saw logs.....	5,650	206 55	22,843	522 45		
do	Free					
Staves, all kinds.....	2,040	373 95	1,192	65 52		
do	Free		1,398			
Shingles	23	13 77	59	12 75	87	12 34
Split Posts and Rails.....			21	4 40		
Timber, square	54,399	8,154 83	7,191	145 30	126	12 59
do	Free		11,510			
Traverses.....	1,416		11,612	30 23	14	0 24
do	Free					
Total	156,771	22,384 67	159,430	4,127 67	102,102	6,142 15
<i>Farm Stock.</i>						
Cattle			346	27 16	48	1 60
Hogs			26	3 20		
Horses	8	1 40	342	26 05	21	0 70
do	Free		3			
Sheep.....	1		123	11 89	114	3 80
Total	9	1 40	840	68 30	183	6 10
<i>Produce of Animals.</i>						
Bones.....			711	97 96	277	27 70
Horns and Hoofs, Hides and Skins, Raw.....	5	1 00	23	3 11	3	0 10
Lard and Lard Oil.....	38	7 60	160	17 63		
do	Free		19			
Meats, other than Pork.....	17	3 40	42	3 77		
do	Free		13			

Continued—CANALS.

during the Fiscal Year ended 30th June, 1889, showing the Total Quantity and the Amount of Tolls collected thereon.

Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.
430,698	4,833 76	184,575	2,082 37	102,058	2,041 16	4,114	57 75
No.		No.		No.		No.	
14,248	188 73	3,527	100 22	.....	.....	777	7 77
Tons.		Tons.		Tons.		Tons.	
.....		83	3 77	.....		.....
17,600	250 46	830	14 53	.....		.....
17,587				.....		.....
68,670	2,547 59	22,676	418 38	.....		12,897	133 47
14	1 19	62	9 00	.....		.....
554,436	43,819 99	59,412	2,290 12	5,293	52 93	449	3 23
1,496				.....		.....
.....		519	41 52	.....		.....
3,423	325 87	6,889	785 17	.....		141	4 81
10,382	237 26	676	15 42	.....		1,225	24 60
2,275				.....		.....
1	0 15	1	0 02	.....		.....
.....		
548	415 48	44	7 20	.....		74	9 41
11	2 32	20	3 08	.....		.....
4,570	76 32	220	6 36	.....		705	14 25
6,240				.....		.....
80	0 50	261	4 52	.....		.....
20				.....		.....
687,353	47,677 13	91,693	3,599 09	5,293	52 93	15,491	189 77
.....		
.....		
558	35 18	4	0 11	.....		.....
88	6 31			.....		.....
255	13 58	13	0 37	.....		.....
.....		
393	27 93	6	0 16	.....		.....
.....		
1,294	83 00	23	0 64	.....		.....
.....		
.....		
18	1 60	32	1 32	.....		.....
.....		
36	3 36	9	0 26	.....		.....
6	0 59	22	0 61	.....		.....
.....		
39	3 83	3	0 08	.....		.....
.....		

No. 17.—SUMMARY STATEMENT of Traffic on

ARTICLES.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
<i>Produce of Animals—Continued.</i>		\$ cts.		\$ cts.		\$ cts.
Pork.....	502	100 40	439	33 28	6	0 20
do..... Free			401			
Tallow.....	123	18 50	230	11 36	53	5 30
Wool.....	84	16 00	3	0 34		
Agricultural Products not enumerated, Animal.....			642	84 72	39	1 30
Total.....	769	146 90	2,683	252 17	378	34 60
<i>Agricultural Products.</i>						
Agricultural Products not enumerated, Vegetable.....	7	0 14	669	65 87	218	7 27
do..... Free	21					
Apples.....	902	33 72	1,676	230 42	709	58 05
Barley.....	6,261	883 29	1,701	61 95	373	30 64
Cotton, Raw.....						
Corn.....	269,962	53,992 40	7,787	217 17		
do..... Free			138,481			
Flax and Hemp.....			10	0 75		
Flour.....	13,378	1,846 17	3,284	383 57	335	11 38
do..... Free			4,861			
Hay, Pressed.....	18	0 40	1,645	84 17	2,093	109 13
Meals, all kinds.....	13,112	2,584 96	740	39 45		
do..... Free	31		100			
Manilla.....	20	3 00	16	3 20		
Oats.....	19,703	3,940 60	1,662	97 02	1,104	36 83
Pease.....	708	70 80	21,210	435 34	192	7 55
Potatoes.....			261	18 74		
Rye.....	1,106	206 45	7	1 05	9	0 30
Seeds—Flax, Clover and Grass.....	84	16 39	8,238	361 05	6	0 20
do..... Free	291		4			
Tobacco, Raw.....			8	0 87	3	0 30
Wheat.....	142,740	26,918 15	15,685	315 01	3	0 10
do..... Free			81,946			
Total.....	468,344	90,496 47	289,991	2,315 63	5,045	261 75
<i>Manufactures.</i>						
Ashes, Pot and Pearl.....	84	16 75	70	14 00		
do..... Free			80			
Agricultural Implements.....			114	14 86	9	0 90
Barrels, Empty.....	341	45 15	227	19 71		
do..... Free						
Bricks.....	71	2 59	7,747	327 06	3,764	362 34
do..... Free	156					
Cement and Water Lime.....	284	40 59	2,482	306 46		
do..... Free	139		29			
Crockery, earthenware.....	143	4 07	587	115 16	10	1 00
do..... Free	347					
Furniture.....	55	10 15	621	99 59	28	1 00
do..... Free	1					
Glass, all kinds.....	9	0 67	523	97 74		
do..... Free	135		2			
Iron, Railway.....	93	10 02	12,142	1,701 02		
do..... Free	10,761					
Iron, Pig.....	1,602	267 75	4,819	702 72		
do..... Free	489					

the undermentioned Canals, &c.—*Continued.*

Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.
45	3 39	92	2 72				
69	4 51	1	0 03				
1	0 10	5	0 13				
1,597	144 59	727	35 01				
1,811	161 97	891	40 16				
56	3 39	18	0 48	13,361	133 61		
47	2 60	59	2 48				
708	47 35	276	6 52				
		62	2 04				
27	1 19	374	11 13	1,992	19 92		
651	57 20	316	14 16				
7	0 69	42	1 08				
696	45 45	3	0 09				
1,504	108 36	11	0 29				
496	34 08	101	2 58				
1	0 10	15	0 37				
18	1 78	35	0 91				
		1	0 03				
29	2 78	238	6 18				
4,240	304 97	1,551	48 34	15,353	153 53		
46	8 74	31	7 40				
20	2 93	113	12 82				
66	8 06	20	1 54				
113	6 39	453	11 19				
31	2 63	146	4 28				
		20	2 58				
53	6 89	48	4 90				
		13	1 16				
		1	0 05				
5	0 30	321	9 63				

No. 17.—SUMMARY STATEMENT of Traffic on

ARTICLES.	Welland Canal.		St. Lawrence Canals.		Chambly Canal.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
Iron all other.....	1,343	224 29	14,077	767 99	25	2 50
do.....Free	481		138			
Molasses.....	268	38 54	2,803	184 71	2,243	219 44
do.....Free	5					
Nails.....	183	12 41	3,299	526 41	3	0 10
do.....Free	554					
Oil.....	282	12 57	1,491	166 18	547	52 98
do.....Free	16					
Oil Cake.....			14	0 59		
Paint.....	453	64 30	408	60 78	12	1 20
do.....Free	53					
Pitch and Tar.....			1,510	108 13	890	89 00
Rosin.....			1,952	104 23	2,117	211 70
Soda Ash.....	403	13 05	1,712	338 61		
do.....Free	1,110					
Spirits, Whiskey, &c.....	253	42 38	900	163 69		
do.....Free	231		14			
Steel.....	559	83 74	202	31 01	12	0 40
Sugar.....	1,754	239 65	7,374	851 08	3,758	375 40
do.....Free	87					
Tin.....	30	0 57	801	143 57		
do.....Free	487					
Turpentine.....			374	21 50	342	34 20
White Lead.....	2	0 04	93	14 70	3	0 10
Whiting.....	275	41 25	458	90 02		
do.....Free	12					
Woodenware.....	68	27 20	107	24 70		
do.....Free			1			
Total.....	23,621	1,197 73	67,173	6,996 22	13,763	1,352 26
<i>Merchandise.</i>						
Brimstone, Crude.....	15	2 25			16	1 60
Clay, Lime and Sand.....	1,170	129 89	24,904	994 70	4,667	482 56
do.....Free	80		80			
Coal.....	229,791	45,136 62	156,280	21,345 51	120,104	11,723 82
do.....Free			108,211		307	
Dye Woods, and Dye Stuffs.....			220	13 64	136	13 30
Fish.....	173	25 82	507	56 36		
do.....Free	9					
Gypsum.....	715	43 94	3,198	83 15		
Ores, all kinds.....	11,726	586 30	1,094	54 70		
Marble.....	4,697	704 55	15	2 75		
Rags.....			383	41 65		
Salt.....	294	13 35	4,427	548 45	436	37 48
do.....Free	4,058					
Stone, all kinds.....	12,222	1,639 99	11,587	708 86	1,027	96 04
do.....Free			1,250			
All other Goods and Merchandise, not enumerated.....	22,595	3,394 68	10,750	1,634 12	2,481	194 68
do.....Free	1,195		193			
Total.....	288,740	51,677 39	323,099	25,483 89	129,174	12,549 48
Grand Totals, Passengers and Tonnage of Vessels not included.....	938,254	182,007 90	843,216	55,517 26	250,645	23,270 43

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

[1889]

the undermentioned Canals, &c.—*Concluded.*

Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canal.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.
56	3 76	273	7 32	.	.	.	.
4	0 58	95	8 42	.	.	.	.
3	0 30	211	18 85	.	.	.	.
12	1 45	150	14 28	.	.	.	.
.	.	6	0 18	.	.	.	.
.	.	5	0 45	.	.	.	.
.	.	13	1 14	.	.	.	.
.	.	25	2 18	.	.	.	.
1	0 19	122	11 06	.	.	.	.
.	.	2	0 05	.	.	.	.
9	1 35	458	43 23	.	.	.	.
1	0 19	10	1 07	.	.	.	.
.
2	0 38	7	0 63	.	.	.	.
.	.	16	1 40	.	.	.	.
3	0 60	7	1 20	.	.	.	.
.
425	44 74	2,566	167 01	.	.	.	.
.
7,832	203 88	24	0 58	.	.	.	.
327	10 90	11,976	535 17	23,745	237 45	.	.
2	0 19	2,096	2	.	.	.	.
.	.	173	0 18	1,037	10 37	.	.
.	.	.	4 18	.	.	.	.
1,444	72 20	1,262	63 10	.	.	.	.
.	.	16	1 42	.	.	.	.
48	8 57	17	2 37	.	.	.	.
5	0 20	879	31 08	.	.	.	.
.
4	0 34	2,223	63 23	.	.	661	4 40
.
347	47 05	979	125 10	1,506	15 06	1	0 03
.
10,009	343 33	19,647	826 41	26,288	262 88	662	4 43
.
705,132	53,637 63	116,371	6,864 24	46,934	2,510 50	16,153	259 72

B. H. TEAKLES,
Chief Clerk Canals Revenue.

APPENDIX A—Continued—CANALS.

No. 18.—STATEMENT showing the Amount of Tolls Accrued each Month during the Fiscal Year ended 30th June, 1889.

Canals and Offices.	1888.						1889.					
	July.	August.	September.	October.	November.	December.	Jan.	Mar.	April.	May.	June.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ c.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
WELLAND CANAL.												
Chippawa.....	17 13	5 40	8 20	23 87	14 22	7 81	.....	.....	6 01	1 75	34 05	118 44
Colborne.....	15,462 93	20,130 22	16,433 40	15,684 23	10,145 83	16 16	.....	.....	12,450 54	16,397 20	18,478 63	125,199 14
Dalhousie.....	7,350 82	6,823 62	6,963 96	7,062 49	4,582 12	0 76	.....	.....	4,442 16	7,100 55	10,314 06	54,640 54
Dunnville.....	32 09	72 08	.....	69 36	70 20	.....	.....	.....	.....	83 28	52 65	379 66
Matland.....	14 17	13 35	29 83	0 54	0 25	.....	.....	.....	.....	7 29	14 23	79 66
Robinson.....	239 64	169 41	120 62	129 14	58 77	18 66	.....	.....	127 34	166 95	102 04	1,132 57
St. Catharines.....	82 92	75 57	105 06	63 51	27 11	4 61	.....	.....	35 68	34 73	28 70	457 89
Total, Welland Canal.....	23,199 70	27,289 65	23,661 07	23,033 14	14,898 50	48 00	.....	.....	17,061 73	23,791 75	29,024 36	182,007 90
ST. LAWRENCE CANALS.												
Beauharnois.....	116 64	73 25	132 11	148 17	34 79	.....	.....	.....	63 32	46 96	72 87	688 11
Cardinal.....	108 05	156 93	133 98	70 34	188 10	4 85	.....	.....	65 05	57 68	102 46	887 44
Cornwall.....	2,600 08	2,259 25	3,095 08	748 84	1,900 77	75 44	.....	.....	8 21	2,359 31	2,848 90	15,895 88
Kingston.....	2,232 49	2,370 32	1,794 36	645 06	293 07	.....	.....	.....	439 57	1,482 50	1,884 10	11,111 47
Lachine.....	363 69	525 51	1,504 89	326 73	258 96	0 25	.....	.....	36 09	282 60	342 43	2,641 15
Montreal.....	4,171 23	4,649 78	3,627 56	2,537 33	1,586 86	.....	.....	.....	628 60	3,421 40	3,670 45	24,293 21
Total, St. Lawrence Canals.....	9,592 18	10,035 04	9,257 98	4,476 47	4,262 55	80 54	.....	.....	1,240 84	7,650 45	8,921 21	55,517 26
CHAMBLY CANAL.												
Chambly.....	1,103 60	1,291 69	1,032 65	1,315 21	807 37	.....	.....	.....	19 96	600 15	778 46	6,969 09
St. John's.....	2,029 08	2,194 69	2,816 99	1,937 35	943 01	.....	.....	.....	.....	2,906 84	2,961 95	15,789 91
St. Ours.....	76 15	77 18	81 20	39 53	79 00	.....	.....	.....	10 50	43 37	44 50	511 43
Total, Chambly Canal.....	3,208 83	3,563 56	3,950 84	3,352 09	1,829 38	.....	.....	.....	30 46	3,550 36	3,784 91	23,270 43

OTTAWA CANALS.										
Ottawa.....	4,974 82	4,003 02	3,557 64	4,688 19	1,813 38	.....	971 12	7,191 48	6,127 09	33,926 74
Carillon.....	179 33	42 00	18 74	54 77	24 66	.....	5 83	142 49	180 69	648 51
Grenville.....	2,808 09	2,768 28	1,903 90	2,705 94	1,856 07	73 07	383 72	2,591 86	2,506 20	17,597 13
St. Anne's.....	208 34	232 35	220 74	256 11	131 99	.....	64 46	145 33	205 93	1,465 25
Total, Ottawa Canals.....	8,170 58	7,645 65	5,701 02	7,705 01	3,826 10	73 07	1,425 13	10,071 16	9,019 91	53,637 63
RIDEAU CANAL.										
Kingston Mills.....	354 17	261 29	263 22	169 89	50 77	.....	7 97	179 15	254 06	1,540 52
Ottawa.....	1,006 57	765 25	549 27	573 49	284 20	.....	104 46	657 66	839 12	4,780 02
Smith's Falls.....	101 75	140 61	41 21	86 50	34 68	.....	.....	65 54	73 41	543 70
Total, Rideau Canal.....	1,462 49	1,167 15	853 70	829 88	369 65	.....	112 43	902 35	1,166 59	6,864 24
ST. PETER'S CANAL.										
St. Peter's	194 67	317 14	313 81	345 20	263 60	99 93	150 50	457 71	356 00	2,510 50
TRENT VALLEY CANALS.										
Bobcaygeon.....	23 09	32 19	56 47	8 07	.....	.....	.....	14 78	34 58	169 18
Peterborough.....	10 50	10 50	7 00	10 00	11 10	.....	.....	6 64	16 62	72 36
Hastings.....	2 50	7 50	2 98	3 10	2 10	.....	.....	.....	.....	18 18
Total, Newcastle District Canals	36 09	50 19	66 45	21 17	13 20	.....	.....	21 42	51 20	259 72
Grand Totals.....	45,864 54	50,068 38	43,804 87	39,762 96	25,462 98	301 54	20,021 09	46,445 20	52,324 18	324,067 68

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAY AND CANALS,
OTTAWA, 30th November, 1889.

[1889]

APPENDIX A—Continued—CANALS.

No. 19.—GENERAL STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals, during the Fiscal Year ended the 30th June, 1889, and the Amount of Tolls collected thereon.

VESSELS.	Total Number	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Welland Canal.													
Canadian Vessels, steam.....	789	60,833	55,341	66,034	2,929	280	.....	4,987	75,661	132,134	133,931	266,065	\$ cts. 3,705 54
do sail.....	1,191	50,558	42,115	66,744	11,427	889	.....	15,530	74,214	133,721	127,756	261,477	4,926 18
Total Canadian.....	1,980	111,391	97,456	132,778	14,356	1,169	.....	20,517	149,875	265,855	261,687	527,542	8,631 72
United States Vessels, steam.....	352	12	20	5,013	391	120,363	111,109	346	15,452	125,734	126,972	252,706	3,795 32
do sail.	507	185	5	3,777	862	74,333	52,879	.....	26,746	78,295	80,492	158,787	3,551 07
Total United States.....	859	197	25	8,790	1,253	194,696	163,988	346	42,198	204,029	207,464	411,493	7,346 39
Grand Total, Welland Canal	2,839	111,588	97,481	141,568	15,609	195,865	163,988	20,863	192,073	469,884	469,151	939,035	15,978 11
St. Lawrence Canals.													
Canadian Vessels, steam.....	2,900	318,741	269,721	14,118	.....	.....	.....	.....	3,646	332,859	273,367	606,226	3,640 77
do sail ..	5,111	486,283	306,800	26,698	.....	36	.....	73	47,245	513,090	354,045	867,135	9,433 80
Total Canadian ..	8,011	805,024	576,521	40,816	.....	36	.....	73	50,891	845,949	627,412	1,473,361	13,074 57
United States Vessels, steam.....	470	368	712	1,630	68	9,328	6,320	103	1,689	9,429	8,789	18,218	129 45
do sail.....	877	2,055	12,623	1,752	6,183	1,208	1,527	54,921	4,090	59,936	24,423	84,359	685 13
Total United States.....	1,347	2,423	13,335	3,382	6,251	8,536	7,847	55,024	5,779	69,365	33,212	102,577	814 58
Grand Total, St. Lawrence Canals	9,358	807,447	589,856	44,198	6,251	8,572	7,847	55,097	56,670	915,314	660,624	1,575,938	13,889 15

No. 19.—GENERAL STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—Continued.

VESSELS.	Total Number	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
<i>St. Peters Canal</i> —Continued.													\$ cts.
United States Vessels, steam do.....	3	78	175									253	5 06
Total United States.....	3	78	175							78	175	253	5 06
Grand Total, St. Peter's Canal.	1,823	53,963	47,901		97			97		54,060	47,998	102,058	2,041 16
<i>Trent Valley Canal.</i>													
Canadian Vessels, steam.....	122	3,301	203							3,301	203	3,504	53 75
do.....	8	410	200							410	200	610	4 00
Total Canadian.....	130	3,711	403							3,711	403	4,114	57 75
United States Vessels, steam do.....													
Total United States.....													
Grand Total, Trent Valley Canal.....	130	3,711	403							3,711	403	4,114	57 75

RECAPITULATION.

CANADIAN VESSELS.													
<i>Steam and Sail.</i>													
Welland.....	1,980	111,391	97,456	132,778	14,356	1,169	.....	20,517	149,875	265,855	261,087	527,542	8,631 72
St. Lawrence.....	8,011	805,024	576,321	40,816	.....	36	.....	73	50,891	845,949	627,412	1,473,361	13,074 57
Chambly.....	935	39,696	39,241	6,351	1,334	.....	.....	.....	29,568	46,047	70,143	116,190	1,133 92
Ottawa.....	2,620	67,508	289,297	.....	20,622	.....	.....	.....	.....	67,508	309,919	377,427	3,611 00
Trent Valley.....	130	3,711	403	.....	.....	.....	.....	.....	.....	3,711	403	4,114	57 75
Rideau.....	2,515	79,442	86,380	255	.....	.....	.....	.....	.....	79,637	86,380	166,077	1,827 11
St. Peter's.....	1,820	53,885	47,726	.....	97	.....	.....	97	.....	53,982	47,823	101,805	2,036 10
Total Canadian.....	18,011	1,160,657	1,137,024	180,200	36,409	1,205	.....	20,687	230,334	1,362,749	1,403,767	2,766,516	30,372 17
UNITED STATES VESSELS.													
<i>Steam and Sail.</i>													
Welland.....	859	197	25	8,790	1,253	194,696	163,988	346	42,198	204,029	207,464	411,493	7,346 39
St. Lawrence.....	1,347	2,423	13,335	3,382	6,251	8,536	7,847	55,024	5,779	69,365	98,211	102,577	814 58
Chambly.....	1,370	1,938	1,989	33,124	5,861	.....	.....	.....	90,265	35,062	33,115	133,177	1,728 09
Ottawa.....	546	9,248	1,957	.....	41,403	.....	.....	663	.....	9,911	43,360	53,271	1,222 76
Trent Valley.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rideau.....	237	5,892	9,474	3,132	.....	.....	.....	.....	.....	9,024	9,474	18,498	255 26
St. Peter's.....	3	78	175	.....	.....	.....	.....	.....	.....	78	175	253	5 06
Total United States.....	4,362	19,776	26,955	48,428	54,768	203,232	171,835	56,033	138,242	327,469	391,800	719,269	11,372 14
Grand Total Canadian and United States.....	22,373	1,180,433	1,163,979	228,628	91,177	204,437	171,835	76,720	308,576	1,690,218	1,795,567	3,485,785	41,744 31

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued—CANALS.

No. 20.—COMPARATIVE STATEMENT of the Total Movement of Property, Passengers and Vessels on the undermentioned Canals for the Fiscal Year ended 30th June, 1889, and the three preceding Years.

GOODS, WARES AND MERCHANDISE.	Welland Canal.				St. Lawrence Canals.				Chambly Canal.			
	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.
Farm Stock.....	7	15	17	9	1,049	1,031	1,092	840	123	258	195	183
Forest.....	212,223	159,030	121,892	156,771	183,999	170,786	169,219	159,430	80,799	77,809	103,164	102,102
Manufactures.....	27,084	30,562	34,430	23,621	54,754	57,020	65,391	67,173	10,235	9,083	16,360	13,763
Merchandise.....	330,575	280,046	251,078	288,740	274,894	283,464	306,343	323,099	95,925	90,596	111,303	129,174
Vegetable Food and other Agricultural Products.....	364,973	368,934	419,883	469,113	308,529	351,211	333,170	292,674	12,341	9,549	6,988	5,423
Total Tons.....	934,862	838,587	827,300	938,254	823,225	863,512	875,215	843,216	199,423	187,295	238,110	250,645
Passengers.....	3,851	3,565	5,464	3,071	42,837	53,574	58,079	48,242	3,756	4,944	3,419	3,713
Number of Vessels of all kinds..	3,205	3,202	2,729	2,839	9,711	10,358	9,744	9,358	2,382	2,068	2,311	2,305
Total Tonnage of Vessels of all kinds.....	824,014	836,995	807,434	939,035	1,657,036	1,720,920	1,682,879	1,575,938	238,485	220,828	247,766	249,367
	Welland Canal.				St. Lawrence Canals.				Chambly Canal.			
	Percentage of Increase of 1889 Compared with 1888, is		Percentage of Increase of 1889 Compared with 1886, is		Percentage of Decrease of 1889 Compared with 1886 is		Percentage of Increase of 1889 Compared with 1886 is		Percentage of Increase of 1889 Compared with 1888 is		Percentage of Increase of 1889 Compared with 1886 is	
	13.41		0.35		3.65		2.42		5.26		25.68	

[1889]

GOODS, WARES AND MERCHANDISE.	Burlington Bay Canal.				Ottawa Canals.				Rideau Canal.			
	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.
Farm Stock.....					1,266	1,510	1,220	1,204	19	30	36	23
Forest.....	4,748				753,405	718,599	668,105	687,353	71,603	66,570	75,860	91,693
Manufactures.....	3,423				567	1,079	484	425	1,561	4,516	2,461	2,566
Merchandise.....	38,850				6,692	12,972	7,913	10,009	14,302	16,997	13,666	19,647
Vegetable Food and other Agri- cultural Products.....	5,755				10,984	13,258	7,712	6,051	2,362	3,085	2,945	2,442
Total Tons.....	52,776				772,914	91,198	685,434	705,132	89,847	91,198	95,968	116,371
Passengers.....	1,778				14,339	14,952	14,477	14,248	2,625	3,114	3,552	3,527
Number of Vessels of all kinds..	304				3,674	4,143	3,326	3,166	2,020	2,378	2,598	2,752
Total Tonnage of Vessels of all kinds.....	78,690				458,331	477,763	431,289	430,698	130,443	141,580	163,967	184,575
					Ottawa Canals.				Rideau Canal.			
					Percentage of Increase of 1889 compared with 1888 is 4	Percentage of Decrease of 1889 compared with 1886 is			Percentage of Increase of 1889 compared with 1888 is			
					2·87	8·77			21·26			
									29·52			

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued—CANALS.

No. 21.—COMPARATIVE STATEMENT of the Tonnage of Vessels and Goods passed through the Canals during the Fiscal Years ended 30th June, 1886, 1887, 1888, 1889.

PROPERTY AND VESSELS.	Welland Canal.				St. Lawrence Canals.				Chambly Canal.			
	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.
Tonnage of Property, Up.....	314,936	262,978	273,484	296,090	139,966	162,247	186,278	280,075	86,140	81,390	106,421	91,226
do Down.....	599,542	561,984	553,816	642,164	408,604	422,002	384,045	563,141	113,283	105,731	131,270	159,419
Total Tonnage of Property, Up and Down.....	914,478	824,962	827,300	938,254	548,570	584,249	571,323	843,216	199,423	187,121	237,691	250,645
Tonnage of Vessels, Up.....	401,503	413,515	397,961	469,884	969,227	999,464	965,731	915,314	83,255	75,830	83,342	81,109
do Down.....	422,511	423,480	409,473	469,151	637,809	721,456	717,148	660,624	155,230	144,938	164,424	168,258
Total Tonnage of Vessels, Up and Down.....	824,014	836,995	807,434	939,035	1,607,036	1,720,920	1,642,879	1,575,938	238,485	220,828	247,766	249,367
Grand Total Tonnage of Property and Vessels, Up and Down.....	1,577,152	1,661,957	1,634,734	1,877,289	2,205,606	2,305,169	2,254,202	2,419,154	437,908	407,949	485,457	500,012

PROPERTY AND VESSELS.	Burlington Bay Canal.			Ottawa Canals.			Rideau Canal.		
	1886.	1887.	1888.	1889.	1886.	1887.	1888.	1889.	1889.
Tonnage of Property, Up.....	43,674								
do Down.....	9,102								
Total Tonnage of Property, Up and Down.....	52,776								
Tonnage of Vessels, Up.....	40,597								
do Down.....	38,093								
Total Tonnage of Vessels, Up and Down.....	78,690								
Grand Total Tonnage of Property and Vessels, Up and Down.....	131,466								

[1889]

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued—CANALS.

No. 22.—COMPARATIVE STATEMENT showing the Quantity of each Article transported on the Canals during the Fiscal Years ending 30th June, 1888 and 1889, and the Amount of Tolls collected thereon.

ARTICLES.	1888.		1889.	
	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.
Ashes, Pot and Pearl.....	300	61 74	231	46 89
Apples.....	4,621	544 16	3,393	327 27
Agricultural Products, not enumerated, Vegetable....	11,212	250 84	14,329	210 76
do do Animal.....	2,833	205 86	3,005	265 62
Agricultural Implements.....	294	36 90	256	31 51
Barley.....	16,123	1,974 53	9,319	1,029 75
Bricks.....	11,887	816 66	12,148	709 57
Bones.....	1,550	147 41	1,038	128 58
Brimstone.....	46	6 23	31	3 85
Cement and Water Lime.....	3,963	550 36	2,943	353 96
Clay, Lime and Sand.....	36,843	1,762 14	38,597	1,811 61
Coal.....	462,817	65,923 03	542,223	78,989 47
Corn.....	147,702	27,840 49	277,811	54,211 61
Cattle.....	1,169	76 93	956	64 05
Cotton, Raw.....	10	1 20		
Crockery and Earthenware.....	770	146 10	760	122 81
Dye Woods and Dye Stuffs.....	358	30 10	360	27 31
Fish.....	3,732	212 69	1,890	96 73
Flax and Hemp.....	15	2 15	10	75
Flour.....	33,220	3,668 39	19,390	2,273 36
Furniture.....	956	146 71	805	122 53
Gypsum.....	4,789	107 51	3,913	127 09
Glass, all kinds.....	595	108 40	545	99 57
Hay, Pressed.....	2,518	159 56	4,728	265 06
Hogs.....	119	8 64	114	9 51
Horses.....	674	41 32	639	42 10
Hides and Skins, Horns and Hoofs.....	257	41 53	76	7 83
Ice.....				
Iron, Railway.....	3,939	530 78	12,236	1,711 09
Iron, Pig.....	5,065	791 67	6,747	980 40
Iron, all other.....	16,560	1,506 39	15,774	1,005 86
Iron Ore.....	15,675	783 75	11,726	586 30
Kyrolite or Chemical Ore, and other Ore, except Iron	5,041	252 05	3,800	190 00
Lard and Lard Oil.....	218	23 82	226	26 43
Meals, all kinds.....	13,632	2,532 16	13,901	2,626 18
Meats, other than Pork.....	236	31 69	101	11 08
Marble.....	2,901	436 17	4,728	708 72
Manilla.....	699	104 15	36	6 20
Molasses.....	7,003	631 28	5,413	451 69
Nails.....	3,873	570 83	3,699	558 07
Oats.....	28,834	4,906 36	23,168	4,119 99
Oil, in Barrels.....	4,161	446 27	2,582	247 46
Oil Cake.....	46	4 46	20	0 77
Pease.....	29,297	750 98	23,625	622 34
Potatoes.....	723	46 03	858	55 40
Pork.....	1,694	219 45	1,084	139 99
Paint.....	1,560	222 74	878	126 73
Pitch and Tar.....	2,381	200 49	2,413	198 27
Rags.....	868	108 33	448	52 59
Rye.....	148	3 23	1,138	208 27
Resin.....	3,675	284 78	4,069	315 93
Salt.....	9,908	1,068 40	6,041	630 56
Stone, intended for cutting.....	12,031	1,484 07	12,256	1,604 10
do wrought.....	778	128 13	633	75 15
do not suitable for cutting, unwrought.....	21,816	1,346 24	14,835	833 61
Seeds, all kinds.....	8,820	385 89	8,381	380 33
Sheep.....	596	38 22	636	43 78
Soda Ash.....	1,879	338 20	2,140	353 84

No. 22.—COMPARATIVE STATEMENT showing the Quantity, &c.—*Concluded.*

ARTICLES.	1888.		1889.	
	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.
Steel.....	4,904	761 97	775	115 20
Sugar.....	27,189	3,436 46	13,353	1,510 71
Spirits.....	1,569	259 54	1,276	217 32
Tobacco, Raw.....	12	1 36	12	1 20
Tallow.....	828	116 25	476	39 70
Tin.....	2,484	473 63	842	145 40
Turpentine.....	1,326	100 79	716	55 70
Wheat.....	277,447	41,035 72	158,695	27,242 22
White Lead.....	230	43 64	107	15 85
Whiting.....	648	108 62	749	132 67
Wool.....	139	24 17	93	16 57
All other Goods and Merchandise, not enumerated....	44,569	6,176 17	38,659	5,410 72
Bark.....	153	3 89	83	3 77
Barrels, empty.....	595	52 98	654	74 46
Boat Knees.....				
Floats.....	34,492	514 88	23,886	370 61
Firewood, in Vessels.....	114,144	3,579 62	126,672	4,143 41
do Rafts.....	7,548	85 74	7,002	97 05
Hoops.....	43	3 62	24	2 29
Hop Poles.....	18	2 50	62	9 00
Lumber Sawed, in Vessels.....	813,158	63,034 30	835,537	66,527 83
do Rafts.....	3,580	210 81	4,069	54 98
Masts, Spars and Telegraph Poles, in Vessels.....	99	1 25	519	41 52
do do Rafts.....	21,765	546 90	24,897	623 10
Railway Ties, in Vessels.....	21,428	1,684 18	21,115	1,766 77
do Rafts.....	3,379	296 50	1,718	161 27
Sawlogs.....	45,068	1,221 10	40,776	1,006 28
Staves and Headings, Barrel.....	136	6 73	150	15 52
do do Pipe.....	176	21 48	874	145 31
do do West India.....	1,489	224 16	2,208	278 66
do do Salt Barrel.....			2	0 15
Shingles.....	799	438 01	835	470 95
Split Posts and Fence Rails, in Vessels.....	53	6 44	41	7 48
do do do Rafts.....	3	0 74	11	2 32
Timber, Square, in Vessels.....	40,441	5,732 70	58,002	8,201 65
do do Rafts.....	17,382	531 15	9,209	208 00
Traverses.....	10,908	30 60	11,967	35 49
Woodenware and Wood, partly manufactured.....	701	267 04	185	53 70
Totals—Passengers and Tonnage of Vessels not included.....	2,452,063	256,085 73	2,509,248	279,455 11
Passengers—Total Number.....	84,991	3,495 99	73,578	2,868 26
Vessels—Tonnage.....	3,433,242	40,435 02	3,485,785	41,744 31
Total Tolls Collected.....		300,016 74		324,067 68
Total Tolls Free.....		14,542 89		17,001 93
Gross Total Tolls.....		314,559 63		341,069 61

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued.

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, and the Amount of Revenue collected during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.....					1							% cts.
Apples.....	233	624							1	85	86	17 15
Agricultural Products, not enumerated,									233	669	902	33 72
Vegetable.....	7								7		7	0 14
Agricultural Products, not enumerated,												
Animal.....												
Agricultural Implements.....												
Barley.....	251	65	5,100	488		2			5,351	555	5,906	830 04
Bricks.....	32	19							32	19	51	1 09
Bones.....												
Brimstone.....					15				15		15	2 25
Cement and Water Lime.....	66				282	4			348	4	352	50 48
Clay, Lime and Sand.....	93	855							93		948	96 66
Coal.....	101	100			172,381	878	22,096		194,578	29,293	223,871	43,901 23
Corn.....						102,974	91,912			104,886	194,886	38,977 20
Cattle.....												
Cotton, Raw.....												
Crookery and Earthenware.....	79	65	1			1			80	70	150	5 71
Dye Wood and Dye Stuffs.....												
Fish.....	1				214						217	32 42
Flax and Hemp.....			2									
Flour.....	10	7,892				8,563	518		10	16,973	16,983	2,015 39
Furniture.....	1		10			30	3		11	33	44	8 12
Gypsum.....		205		680						885	885	47 37
Glass, all kinds.....	10				7		5		17	5	22	2 64
Hay, Pressed.....	18	20							18	20	38	4 40
Hogs.....												
Horses.....		7	2		1				3	9	12	1 03
Hides and Skins, Horns and Hoofs.....						39	2			39	39	7 80

APPENDIX A—Continued.
No. A. (5)—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Continued.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Tons Total.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Firewood, in Vessels.....	2,142	16,431						537	2,142	16,968	19,110	838 11
do Rafts.....												
Hoops.....												
Hop Poles.....												
Lumber, sawn, in Vessels.....	2,335	2,455							2,335	57,269	59,604	10,216 98
do Rafts.....					28,333		8,943					
Masts, Spars and Telegraph Poles, in Vessels.....												
do Rafts.....												
Masts, Spars and Telegraph Poles, in Rafts.....												
Railway ties, in Vessels.....		25										
do Rafts.....			1,073	226					1,073	251	1,324	189 51
Saw Logs.....	41	5,494	949	3,376			140		1,130	8,870	10,000	332 71
Staves and Headings, Barrel.....										104	104	11 68
do do Pipe.....										543	543	101 43
do do W. India.....										1,247	1,247	233 18
Staves, Salt Barrel.....	12									2	2	0 15
Shingles.....									12	6	18	5 21
Split Posts and Fence Rails in Vessels.....												
do Rafts.....												
Timber, Square, in Vessels.....	20	12,699							20	45,255	46,275	6,786 43
do Rafts.....	221								221		221	24 62
Traverses.....												
Woodenware and Wood, partly manufactured.....												
Total Freight paying Tolls.....	19,929	116,041	21,882	23,016	213,689	221,064	217,632		277,951	577,753	855,704	151,811 68
Free Articles, having paid Full Tolls on the St. Lawrence Canals.—												
Agricultural Products, not enumerated, Vegetable.....			35						35		35	

[illegible]

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued.

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the Welland Canal, and the Amount of Tolls collected thereon during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Amount of Tolls Up.		Amount of Tolls Down.		Total Amount of Tolls.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			cts.	cts.	cts.	cts.	cts.	cts.
Ashes, Pot and Pearl.																		
Apples.		2			1													
Agricultural Products, not enumerated, Vegetable.																		
Agricultural Products, not enumerated, Animal.																		
Agricultural Implements.																		
Barley	251																	
Bricks		5,100																
Bones																		
Brimstone			15															
Cement and Water Lime.			282	4														
Clay, Lime and Sand.																		
Coal			172,381	878			17,365	27,183	189,746	28,061	217,807	37,949	20	5,612	20	43,561	40	
Corn				102,974			91,912				194,886			38,977	20	38,977	20	
Cattle																		
Cotton, Raw																		
Crockery and Earthenware	11	1		1														
Dye Wood and Dye Stuffs.																		
Fish			214															
Flax and Hemp.		2							216					32	40		32	40
Flour	10																	
Furniture		10																
Gypsum																		
Glass, all kinds	3		7															
Hay, pressed		20																
Hogs.																		
Horses.																		
Hides and Skins.		2																
Horns and Hoofs.			1															
Ice.				39														

Iron, Railway.....	63	1,053	519	63	1,053	549	63	9 45	9 45
do Pig.....	548	548	1	1,670	1,602	908	157 95	157 95	267 75
do all other.....	14,563	2,309		16,872	16,872		100 50	100 50	282 10
Iron Ore.....							843 60	843 60	843 60
Kryolite, Chemical Ore and other Ore, except Iron.....									
Lard and Lard Oil.....									
Meat, all kinds.....	18	11,598	66	84	11,698	11 80	16 80	16 80	16 80
Meats, other than Pork.....	14		45	59			2,339 60	2,339 60	2,339 60
Marble.....	4,663			4,663	4,663	699 45	699 45	699 45	699 45
Manilla.....	105			105	105	15 75	15 75	15 75	15 75
Molasses.....	139			139	139	20 85	20 85	20 85	20 85
Nails.....	58			154	154	23 10	23 10	23 10	23 10
Oats.....									
Oil in Barrels.....	107	26,510	3	110	26,510	3	5,302 00	5,302 00	5,302 00
Oil Cake.....							16 50	16 50	17 10
Pease.....									
Potatoes.....									
Pork.....	19		326		345	69 00	69 00	69 00	69 00
Paint.....	1	837		840	840	126 00	126 00	126 00	126 00
Pitch and Tar.....									
Rags.....	14				14		2 80	2 80	2 80
Rye.....	179		632		811		162 20	162 20	162 20
Rosin.....									
Salt.....	12	56		76	76	11 40	11 40	11 40	11 40
Stone intended for Cutting.....	1,478		5,057		6,535	1,307 00	1,307 00	1,307 00	1,307 00
Stone, wrought.....			126		126	25 20	25 20	25 20	25 20
do not suitable for Cutting, unwrought.....									
Seeds, all kinds.....	1	4,176	13	4,176	4,176	417 60	417 60	417 60	417 60
Sheep.....							0 15	0 15	12 35
Soda Ash.....									
Steel.....	30	881		30	881	4 50	4 50	4 50	4 50
Sugar.....	11	2,949	2	2,973	2,973	132 15	132 15	132 15	132 15
Spirits, Beer, &c.....	13	7	5	20	176	445 95	1 20	447 15	447 15
Tobacco, Raw.....						3 00	31 20	34 20	34 20
Tallow.....	429			429	429	64 35	0 20	64 35	64 35
Tin.....									
Turpentine.....									
Wheat.....	64,267		44,013		148,279	29,655 80	29,655 80	29,655 80	29,655 80
White Lead.....									
Whiting.....				392	392	58 80	58 80	58 80	58 80
Wool.....							3 60	3 60	3 60
All other Goods and Merchandise, not enumerated.....	243	5	134	22,253	1,574	3,337 95	314 80	3,652 75	3,652 75
Bark.....									
Barrels, Empty.....									
Boat Knees.....			40		178	33 48	33 48	33 48	33 48
Floats.....									
Firewood, in Vessels.....									

APPENDIX A—Continued.

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Concluded.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Amount of Tolls, Up.		Amount of Tolls Down.		Total Tolls.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	\$	cts.	\$	cts.	\$	cts.
Firewood in Rafts																
Hoops																
Hop Poles																
Lumber, Sawn, in Vessels		746		17,485		28,333		8,943		55,507				9,967	14	9,967 14
do Rafts																
Masts, Spars and Telegraph Poles, in Vessels																
Masts, Spars and Telegraph Poles, in Rafts																
Railway Ties, in Vessels																
do Rafts			1,073						1,073		170	60			170	60
Saw Logs																
Staves and Headings, Barrels																
do Pipe																
do West India																
Staves, Salt Barrel																
Stingles																
Split Posts and Fence Rails, in Vessels																
Split Posts and Fence Rails, in Rafts																
Timber, Square, in Vessels		12,699														
do Rafts						6										
Traverses																
Woodenware and wood, partly manufactured					100											
Total Through Freight paying Tolls	742	80,178	20,933	17,485		194,472	17,365	240,716	252,729	532,851	34	300	45,529	30	103,160	00
Free Articles having paid full tolls on the St. Lawrence Canals																
Agricultural Products, not enumerated, Vegetables			35						35							

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B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued.

No. (A) 7.—(GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the Welland Canal, and the Amount of Tolls collected thereon during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Peal												\$ cts.
Apples	233	624							233	624	857	24 72
Agricultural Products not enumerated, Vegetable.	7								7		7	0 14
Agricultural Products not enumerated, Animal.												
1889 Agricultural Implements.												
Barley	32	65		488							553	26 99
Bricks		19							32	19	51	1 09
Bones												
Brimstone												
Cement and Water Lime	66								66		66	7 38
Clay, Lime and Sand	93	855							93	855	948	96 66
Coal	101	100					4,731	1,132	4,832	1,232	6,064	339 83
Corn												
Cattle												
Cotton, Raw									68	65	133	2 91
Crockery and Earthenware.	68	65										
Dye Wood and Dye Stuffs									1		1	0 02
Fish	1											
Flax and Hemp												
Flour		7,892									7,892	137 89
Furniture	1								1		1	0 02
Gypsum												
Glass, all kinds.	7	205		680							885	47 37
Hay, Pressed	18								7		7	0 14
Hogs									18		18	0 40
Horses												
Hides and Skins, Horns and Hoofs		7								7	7	0 18
Ice												
Iron, Railway	30								30		30	0 57

" Pig.....	40						40		40	0 78
Iron Ore.....										
" all other.....										
Kryolite, Chemical Ore and other Ore, except Iron.....										
Lard and Lard Oil.....	229						229		229	10 23
Meal, all kinds.....										
Meats, other than Pork.....										
Marble.....										
Manilla.....										
Molasses.....	8						8	5	13	0 29
Nails.....	136						136		136	2 62
Oats.....	119						119		119	16 58
Oil (in Barrels).....	20						241	20	261	7 00
Oil Cake.....										
Pease.....	26									
Potatoes.....										
Pork.....	17			708			17	708	708	70 80
Paint.....	27						27		27	0 53
Pitch and Tar.....										
Rags.....										
Rye.....										
Rosin.....										
Salt.....	120						120		120	5 25
Stone intended for Cutting.....										
" wrought.....							173		173	30 28
" not suitable for Cutting, unwrought.....										
Seeds, all kinds.....	2,027	75					2,027	75	2,102	118 90
Sheep.....	2						2		2	0 04
Soda Ash.....	185									
Steel.....	3						185	185	370	8 10
Sugar.....	251						3		3	0 06
Spirits, Beer, &c.....							251		251	4 79
Tobacco (Raw).....	22	60					22	62	84	4 71
Tallow.....										
Tin.....	31						2		2	0 05
Turpentine.....							31		31	0 59
Wheat.....	10,130	973								
White Lead.....	6						10,130	2,554	12,684	593 83
Whiting.....							6		6	0 12
Wool.....										
All other Goods and Merchandise, not enumerated.....	383	371					1	383	372	17 00
Barik.....										
Barrels, Empty.....										
Boat Knees.....										
Flouts.....	345	84								
Firewood, in Vessels.....	2,142	16,431					345	84	429	5 09
do Rafts.....							2,142	16,968	19,110	838 11

APPENDIX A—Continued.

No. (A) 7.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Concluded.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hoops.....												§ cts.
Hop Poles.....												
Lumber, Sawn, in Vessels.....	2,325	1,709				53			2,335	1,762	4,097	249 84
“ “ “ Rafts.....												
Masts, Spars and Telegraph Poles, in Vessels.....												
“ “ “ Rafts.....		25		226						251	251	18 91
Masts, Spars and Telegraph Poles, in Vessels.....										8,870	10,000	332 71
“ “ “ Rafts.....				3,376			140		1,130	82	82	8 25
Railway Ties, in Vessels.....				82								
“ “ “ Rafts.....	41	5,494	949									
Saw Logs.....												
Staves and Headings, Barrel												
“ “ “ Pipe.....												
“ “ “ West India.....												
Staves, Salt Barrel.....	12								12		12	0 95
Shingles.....												
Split Posts and Fence Rails, in Vessels.....												
“ “ “ Rafts.....												
Timber, Square, in Vessels.....	20								20		20	1 50
“ “ “ Rafts.....	221								221		221	24 62
Traverses.....												
Woodenware and Wood, partly manufactured.....												
Total Way Freight paying Tolls.....	19,187	35,734	949	5,742			5,086	3,426	25,222	44,902	70,124	3,122 38
Timber passed Free from Welland to Port Robinson.....		3,786								3,786	3,786	
Grand Total Way Freight.....	19,187	39,520	949	5,742			5,086	3,426	25,222	48,688	73,910	

Total Way Tolls on Vessels.....	1,042 29
“ “ Passengers,	29 73
“ “ Free Goods,	\$182 91
Total Way Tolls.....	4,194 40

B. H. TEAKLES,
Chief Clerk Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889,

APPENDIX A—Continued.

No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, and the Amount of Revenue collected during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.	1	78					1	78	79	\$ cts.
Apples.	48	1,619					48	1,619	1,667	15 80
Agricultural Products, not enumerated, Vegetable.	278	392								229 85
Agricultural Products, not enumerated, Animal.	44	478					313	393	706	68 60
Barley.	533	685			25		69	478	547	65 12
Bones.	6,654	293					96	13	109	13 10
Brimstone	1	393					535	1,028	1,563	59 65
Cement and Water Lime	2,375	120					7,840	293	8,133	337 10
Clay, Lime and Sand.	17,982	6,835					1	820	821	99 22
Coal.	3,916	60,957								
Corn.	39	3,583								
Cattle.	325	325								
Cotton, Raw.	10	10								
Crockery and Earthenware.	135	23								
Dye Wood and Dye Stuffs	16	413								
Fish.	464	32								
Flax and Hemp	2									
Flour.	710	5,123								
Furniture.	190	502								
Gypsum.	2,368	451								
Glass, all kinds.	436	51								
Hay, Pressed	1,252	159								
Hogs.	5	17								
Horses.	50	295								
Hides and Skins, Horns and Hoofs.	16	6								
Ice.										
Iron, Railway.	9,795	567								
" Pig	5,037	43								
							10,110	567	10,677	1,504 39
							5,597	43	5,640	827 17

	10,324	1,995	66	1	10,390	1,996	12,386	698 79
" all other								
Iron Ore.....								
Kryolite, Chemical Ore and other Ore, except Iron.....		362				362		18 10
Lard and Lard Oil.....	131	75			131	75	362	22 75
Meals, all kinds.....	498	191			498	191	689	32 01
Meats, other than Pork.....	20	23		6	20	23	49	4 62
Marble.....	17	5			17	5	22	3 82
Manilla.....	18		1		19		19	3 80
Molasses.....	594	62			2,150	62	2,252	159 38
Nails.....	2,197	846	5	1,591	2,617	846	3,463	548 34
Oats.....	585	1,158	420		2,617	846	3,463	548 34
Oil, in Barrels.....	935	292	14	49	1,429	1,158	1,743	100 18
Oil Cake.....		13				341	1,770	194 34
Pease.....	560	19,826			560	13	13	0 49
Potatoes.....	16	117			16	19,826	20,386	419 16
Pork.....	282	132			282	117	133	9 10
Paint.....	246	207	17	16	279	192	474	33 40
Pitch and Tar.....	338	96	1	1,000	1,339	207	486	65 46
Rags.....	289	180			289	96	1,435	99 94
Rye.....						180	469	50 80
Rosin.....	165	46						
Salt.....	2,170	7	1,293	1,669	1,834	46	1,880	97 80
Stone intended for Cutting.....	1,031	1,206	2,148	255	3,463	7	3,470	414 39
" wrought.....	274	3		4	3,434	1,206	4,640	490 57
" not suitable for Cutting, un- wrought.....	52	6,927		135	278	3	281	14 19
Seeds, all kinds.....	8,413	685	168		52	7,062	7,114	209 40
Sheep.....	3	135		1	8,582	685	9,267	384 94
Soda Ash.....	647	23	1,137		3	135	138	12 93
Steel.....	205	13	3	7	1,791	23	1,814	357 07
Sugar.....	3,874	113	42		208	13	221	33 34
Spirits, Beer, &c.....	581	205	216	1,375	5,291	113	5,404	840 14
Tobacco, Raw.....		3			797	205	1,002	183 62
Tallow.....	66	6		3	3	5	8	0 87
Tin.....	291	90	197	100	166	6	172	8 62
Turpentine.....	23	17		1	489	90	579	100 05
Wheat.....	21,916	1,935		348	371	17	388	22 92
White Lead.....	102	24	2		21,916	1,935	23,851	478 94
Whiting.....	364	3		4	104	25	129	22 18
Wool.....	7	7			368	3	371	72 58
All other Goods and Merchandise, not enumerated.....	6,605	1,880	1,057	522	8,144	2,437	10,581	1,625 92
Bark.....								
Barrels, Empty.....	123	54			185	54	239	20 38
Boat Knees.....								
Floats.....	40	4,200			40	4,200	4,240	74 20
Fire Wood, in Vessels.....	6,468	6,885	150		6,693	6,885	13,578	491 72
" Rafts.....		186				186	186	3 89
Hoops.....	3	1		9	12	1	13	1 40

APPENDIX A—Continued.
No. (A) 8—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Concluded.

ARTICLES.	From Canadian to Canadian Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hop Poles.....	29,667	24,753								\$ cts.
Lumber, sawn, in Vessels.....				17	20		30,131	25,658	55,789	2,185 28
“ “ Rafts.....		69						69	69	3 84
Masts, Spars and Telegraph Poles, in Vessels.....		1						1	1	0 02
Masts, Spars and Telegraph Poles, in Rafts.....	2	23,733					2	23,733	23,735	594 05
100 Railway Ties, in Vessels.....	4,245	104					4,245	164	4,409	104 53
189 Saw Logs.....	3	20,570					3	20,570	20,573	470 57
“ “ Staves and Headings, barrel.....		57						67	67	5 20
“ “ “ pipe.....		149						149	149	4 88
“ “ “ West India.....	20	954					20	954	974	53 84
Shingles.....	27	19					30	19	49	9 00
Split Posts and Fence Rails, in Vessels.....	9	5					9	5	14	4 00
“ “ “ Rafts.....	2	2						2	2	0 40
Timber, square, in Vessels.....	675	2,300					675	2,320	2,995	37 74
“ “ “ Rafts.....	347	4,058			20		347	4,058	4,405	153 64
Traverses.....		10,614						10,614	10,614	27 58
Woodenware and Wood, partly manufactured.....	77	8					77	9	86	21 80
Total Freight paying Tolls... ..	157,988	220,810	10,054	1,419	10,382	81,381	179,134	305,975	485,109	38,110 77
Free Articles having paid full tolls on the Welland Canal.										
Ashes.....									85	
Corn.....		85							85	
Flour.....		74,124							74,656	
Furniture.....		3,865				582			3,865	
Glass.....		2						2	2	
		3							3	

[illegible]

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

Iron, Railway	9,427	315	9,742	742	1,461 30	1,461 30
“ Pig	4,750	560	5,310	5,310	796 50	796 50
“ all other	1,678	66	1,744	1,796	261 60	269 40
Iron Ore.	362		362	362		
Kryolite, Chemical Ore and other Ore, except Iron.	28		28	115		
Lard and Lard Oil.						
Meal, all kinds	8		6	14	2 10	2 10
Meats, other than Pork	1			1	0 20	0 20
Marble.	9		9	10	1 80	2 00
Manilla.	18	1	19	19	3 80	3 80
Molasses.	94	5	99	99	19 80	19 80
Nails.	1,757	420	2,177	2,180	435 40	436 00
Oats.						
Oil, in Barrels	409	14	423	103	84 60	105 20
Oil Cake.						
Peas.	3,879		3,879	3,879	86 81	86 81
Potatoes.	11		11	11	1 65	1 65
Pork.	1		1	1	0 15	0 15
Paint.	213	17	230	30	46 00	52 00
Pitch and Tar.	66	1	67	124	13 40	24 80
Rags.	1		1	66	0 20	13 40
Rye.						
Rosin.	23		23	23	4 60	4 60
Salt.	181	1,293	1,474	1,474	221 10	221 10
Stone intended for Cutting.	682	2,148	2,830	2,830	424 50	424 50
“ wrought.						
“ not suitable for Cutting, unwrought	1,107		1,107	1,107		
Seeds, all kinds.	132	6	300	6	89 40	89 40
Sheep.				31	0 90	45 90
Soda Ash.	608	1	1,745	1,746	4 65	4 65
Steel.	197	3	200	1	349 00	349 20
Sugar.	2,984	96	3,026	96	31 55	31 75
Spirits, Beer, &c.	335	216	551	182	605 20	624 40
Tobacco, Raw.	13				36 40	146 60
Tallow.	6				0 75	0 75
Tin.	205	197	13	6	1 95	2 85
Turpentine.	20		20	7	0 90	81 80
Wheat.	1,427		1,427	20	1 40	4 00
White Lead.	89	2	91	4	28 54	28 54
Whiting.	343		343		0 80	19 00
Wool.	5		5	6	68 60	68 60
All other Goods and Merchandise, not enumerated.	2,977	1,047	4,024	1,173	0 90	1 65
Bark.					234 60	1,039 40
Barrels, Empty.	3		3			0 52
Boat Knees.						
Boat Floats.						
Firewood, in Vessels.	3,600		3,600	3,600		240 00

No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—*Concluded.*

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls Up.		Amount of Tolls Down.		Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		\$	cts.	\$	cts.	
Firewood, in Rafts.....																
Hoops.....																
Hop Poles.....																
Lumber, Sawn, in Vessels.....	7	7,928							599	7,928	8,527	257	25	530	25	787 50
Rafts.....		6								6	6			1	06	1 06
Masts, Spars and Telegraph Poles, in Vessels.....																
Masts, Spars and Telegraph Poles, in Rafts.....																
Railway Ties, in Vessels.....	275															
Rafts.....									275		275	21	95			21 95
Saw Logs.....																
Staves and Headings, Barrel.....		67								67	67			5	20	5 20
" " West India.....		1								1	1			0	25	0 25
Staves, Salt Barrel.....		282								282	282			28	48	28 48
Shingles.....																
Split Posts and Fence Rails, in Vessels.....																
Split Posts and Fence Rails, in Rafts.....																
Timber, Square, in Vessels.....		600								600	600			60	00	60 00
Rafts.....																
Traverses.....																
Woodenware and Wood, partly manufactured.....	26	2		1						26	3	10	40	1	20	11 60
Total Freight paying Tolls.....	34,587	85,505	9,436	1			63,113	44,023	148,619	192,642	7,172	12	20,800	36	27,972	48
<i>Free Articles having paid Full Tolls on the Welland Canal—</i>																
Ashes.....		85								85	85					
Barrels, Empty.....		40								40	40					

[illegible]

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

APPENDIX A—Continued.

No. (A) 10.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, and the amount of Tolls collected during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.....	48	160							48	160	208	\$ 11 00
Apples.....	73	339				1			73	340	413	24 65
Agricultural Products, not enumerated, Vegetable.....	44	103					25		69	103	172	8 87
Agricultural Products, not enumerated, Animal.....	96	2							96	2	98	10 90
Agricultural Implements.....	533	685							535	1,028	1,563	59 03
Barley.....	6,546	293		343	2		1,039		7,585	293	7,878	298 85
Bricks.....	1	300		412					1	712	713	83 02
Bones.....												
Brunstone.....	351	119							351	119	470	33 18
Cement and Water Lime.....	17,871	6,714					2,245	100	20,116	6,814	26,930	1,036 53
Clay, Lime and Sand.....								18,148	605	19,969	20,574	1,226 40
Coal.....	3,916	865		605	4	956			3,920	3,091	7,011	212 42
Corn.....	38	3,056				35			38	289	327	22 37
Cattle.....		289								4	4	0 30
Cotton, Raw.....	50	4							50	2	52	8 47
Crockery and Earthenware.....	16	2							213		213	11 45
Dye Wood and Dye Stuffs.....	251	31					197		251	31	282	22 94
Fish.....	2								12		12	0 95
Flax and Hemp.....	705	408			10				723	454	1,177	64 40
Flour.....	135	161			18	46			136	161	297	26 83
Furniture.....	2,365	451				260			2,365	711	3,076	100 48
Gypsum.....	34	42					1		35	42	77	8 17
Glass, all kinds.....	1,128	159		95	45				1,173	254	1,427	66 08
Hay, Pressed.....	5	2							5	2	7	0 35
Hogs.....	42	258							42	258	300	18 86
Horses.....									1	4	5	0 40
Hides and Skins, Horns and Hoofs.....				1								
Ice.....	368	567							368	567	935	43 09
Iron, Railway.....												

APPENDIX A—Continued.
No. (A) 10.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Continued.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hop Poles												\$ cts.
Lumber, sawn, in Vessels.	29,099	16,825	413	888		17	20		29,532	17,730	47,262	1,397 78
“ “ Rafts.		63								63		2 78
Masts, Spars and Telegraph Poles, in Vessels												
“ “ Rafts.		1								1		0 02
Masts, Spars and Telegraph Poles, in Rafts	2	23,733							2	23,733	23,735	594 05
Railway Ties, in Vessels.	3,970	164							3,970	164	4,134	82 58
“ “ Rafts.												
Saw Logs	3	20,570							3	20,570	20,573	470 57
Staves and Headings, Barrels.												
“ “ Pipe.		148								148	148	4 63
“ “ West India.	20	672							20	672	692	25 36
Staves, Salt Barrel.												
Shingles	27	19			3				30	19	49	9 00
Split Posts and Fence Rails, in Vessels.	9	5							9	5	14	4 00
“ “ Rafts.												
Timber, Square, in Vessels.	675	2,300							675	2,320	2,995	37 74
“ “ Rafts.	347	3,458					20		347	3,458	3,805	93 64
Traverses.		10,614								10,614	10,614	27 58
Woodenware and Wood partly manufactured	51	6							51	6	57	10 20
Total Freight paying Tolls.	122,840	133,305	1,179	1,761	710	2,022	10,382	18,268	135,111	157,356	292,467	10,138 29
Free Goods, having paid Full Tolls on the Welland Canal—												
Corn.		8,213								8,213	8,213	

Coal, free per O. C.	46,182	.....	.....	8	.....	48,463	.....	94,653	.....	94,653
Stone	1,800	.....	.....	.....	.....	.....	.....	1,800	.....	1,800
Lumber	134	.....	.....	.....	.....	.....	.....	134	.....	134
Grand Total Freight	170,956	143,518	1,179	1,761	718	2,022	58,845	18,268	231,698	165,569
										397,267
Total Way Tolls on Vessels										5,983 46
" " Passengers										959 64
" " Free Goods										\$4,761 07
Total Way Tolls										17,081 39

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

APPENDIX A—Continued.

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported on the Ottawa Canals and the amount of Revenue Collected, during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Total.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl		61								61		\$ cts.
Apples	10	40								40		11 59
Agricultural Products not enumerated,									10			2 90
Vegetable												
Agricultural Products not enumerated,		79								79		4 73
Animal												
Agricultural Implements	7	1,755							7	1,755	1,762	158 47
Barley	4	23							4	23	27	4 27
Bricks	3	471								471	471	31 35
Bones									3		3	0 06
Brimstone		23								23	23	2 05
Cement and Water Lime	3	47										
Clay, Lime and Sand		8,223							3	47	50	4 33
Coal		327								8,223	8,223	189 25
Corn										327	327	10 90
Cattle	1	563							1	563	564	36 24
Cotton, Raw												
Crockery and Earthenware												
Dye Wood and Dye Stuffs												
Fish												
Flax and Hemp												
Flour		23								23	23	1 03
Furniture	8	36							8	36	44	6 12
Gypsum												
Glass, all kinds.												
Hay, Pressed		815								815	815	73 78
Hogs		91								91	91	6 21
Horses		222								222	244	12 84
Hides and Skins, Horns and Hoofs.	32	39							22	39	39	3 68
Ice												

Iron, Railway.....	10	10	0 78	10	0 78
“ Pig.....	5	5	0 30	5	0 30
“ all other.....	23	93	7 88	116	7 88
Iron Ore.....					
Kryolite, Chemical Ore, and other Ore, except Iron.....	830	830	41 50	830	41 50
Lard and Lard Oil.....	9	9	0 77	9	0 77
Meat, all kinds.....	2	2	0 20	2	0 20
Meats, other than Pork.....	87	87	8 26	87	8 26
Marble.....					
Manilla.....					
Molasses.....	2	2	0 20	2	0 20
Nails.....	3	3	0 30	3	0 30
Oats.....	1,088	1,088	67 11	1,088	67 11
Oil, in barrels.....	8	8	1 45	12	1 45
Oil Cake.....					
Pease.....	1,351	1,351	94 63	1,351	94 63
Potatoes.....	2	497	32 75	499	32 75
Pork.....	4	74	6 57	78	6 57
Paint.....					
Pitch and Tar.....					
Rags.....	50	50	8 86	50	8 86
Rye.....	2	2	0 20	2	0 20
Rosin.....					
Salt.....	5	5	0 20	5	0 20
Stone, intended for Cutting.....	1	1	0 04	1	0 04
“ wrought.....					
“ not suitable for Cutting, unwrought.....					
Seeds, all kinds.....	27	27	2 65	27	2 65
Sheep.....	426	426	30 07	426	30 07
Soda Ash.....					
Steele.....					
Sugar.....	4	4	0 40	4	0 40
Spirits, Beer, &c.....	1	1	0 19	1	0 19
Tobacco, Raw.....					
Tallow.....	75	75	5 03	75	5 03
Tin.....	1	1	0 19	1	0 19
Turpentine.....					
Wheat.....	40	40	3 85	40	3 85
White Lead.....	2	2	0 88	2	0 88
Whiting.....					
Wool.....	1	1	0 10	1	0 10
All other Goods and Merchandise not enumerated.....	82	283	49 29	365	49 29
Bank.....					
Barrels, Empty.....	80	80	10 17	80	10 17
Boat Knees.....					
Floats.....	26,724	26,724	376 51	26,724	376 51
Firewood, in Vessels.....	65,856	67,719	2,640 25	67,719	2,640 25
“ Rafts.....	7,506	7,506	82 06	7,506	82 06

APPENDIX A—Continued.

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Concluded.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tons.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hoops.....		29								29	29	2 50
Hop Poles.....												
Lumber, sawn, in Vessels.....		395,390								530,985	530,985	41,387 27
“ “ Rafts.....	2,221									2,221	2,221	150 89
Masts, Spars and Telegraph Poles, in Vessels.....												
“ “ Rafts.....												
Railway Ties, in Vessels.....		1,674								1,705	1,705	164 60
“ “ Rafts.....		1,784								1,784	1,784	165 29
Saw Logs.....		10,145								10,145	10,145	255 62
Staves and Headings, Barrel.....		1								1	1	0 15
“ “ Pipe.....												
“ “ West India.....												
Staves, Salt Barrel.....												
Shingles.....		213								419	419	277 08
Split Posts and Fence Rails, in Vessels.....												
“ “ Rafts.....		11								11	11	2 32
Timber, Square, in Vessels.....		8,080								8,080	8,080	92 40
“ “ Rafts.....		220								220	220	1 35
Traverses.....												
Woodenware and Wood partly manufactured.....												
Total Freight paying Tolls.....	192	537,740								675,425	675,617	46,532 61
Timber, &c., Free, per Order in Council.....		17,632								17,632	17,632	
Grand Total Freight.....	192	555,372								693,057	693,249	

Total Tolls on Vessels	4,626 27
“ “ Passengers	189 55
“ Free Goods	\$254 83
“ Fines and Damages	7 00
“ Other Receipts	
Total Revenue, exclusive of Hydraulic Rents	\$ 51,355 43

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX A—Continued.

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Concluded.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, \$ cts.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
HOOPS.....												
Hop Poles.....												
Lumber, Sawm, in Vessels.....	5,107	1,261	76,254	8,886							91,874	5,348 32
“ “ Rafts.....									81,361	10,513		
Masts, Spars and Telegraph Poles, in Vessels.....												
“ “ Rafts.....												
Masts, Spars and Telegraph Poles, in Rafts.....												
Railway Ties, in Vessels.....	2,070	750	7,018	3,075					9,088	3,825	12,913	990 44
“ “ Rafts.....												
Sawlogs.....												
Staves and Headings, Barrel.....												
“ “ Pipe.....												
“ “ West India.....												
Staves, Salt Barrel.....												
Shingles.....	38								38		38	5 90
Split Posts and Fence Rails, in Vessels.....	8								8		8	0 54
Split Posts and Fence Rails, in Rafts.....												
Timber, Square, in Vessels.....	126								126		126	12 59
“ “ Rafts.....	14								14		14	0 24
Traverses.....												
Woodenware and Wood partly manufactured.....												
Total Freight paying Tolls.....	9,969	5,999	84,684	11,961			21	128,812	94,674	146,772	241,446	19,383 15
Coal, Free, per Order in Council.....	307								307		307	
Grand Total, Freight.....	10,276	5,999	84,684	11,961			21	128,812	94,981	146,772	241,753	

Total Toll on Vessels.....	2,841 19
“ Passengers	58 28
“ Free Goods	\$30,700
Fines and Damages ..	17 60
Wharfage and Storage .....	.....
Total Revenue, exclusive of Hydraulic Rents.....	22,300 22

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

APPENDIX A—Continued.

No. (A) 13.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal, and the Amount of Revenue collected during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl...		44								44	44	10 70
Apples		59								59	59	2 48
Agricultural Products, not enumerated, Vegetable	16								16		16	0 42
Agricultural Products, not enumerated, Animal	36	708							36	708	744	41 51
Agricultural Implements	19	82							19	82	101	13 95
Barley	275								275		275	6 49
Bricks	116	101							116	101	217	5 97
Bones	3	24							3	24	27	1 19
Brimstone												
Cement and Water Lime	97	20							97	20	117	3 89
Clay, Lime and Sand	18	5							18	5	23	0 55
Coal		9,523								9,523	9,523	417 74
Corn		92								92	92	2 08
Cattle	2								2		2	0 06
Cotton, Raw												
Crockery and Earthenware	14	8							14	8	22	3 03
Dye Wood and Dye Stuffs												
Fish	166	5							166	5	171	4 12
Flax and Hemp												
Flour	33	399							33	399	432	12 58
Furniture	12	17							12	17	29	3 30
Gypsum												
Glass, all kinds	8	4							8	4	12	2 02
Hay, Pressed	272	20							272	20	292	13 59
Hogs												
Horses	2	8							2	8	10	0 29
Hides and Skins, Horns and Hoofs	2	10							2	10	12	0 43
Ice												

APPENDIX A—Continued.

No. (A) 13.—(GENERAL STATEMENT showing the Quantity of each Article transported, &c.—Continued.)

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hoops.....	66								66		66	9 50
Hop Poles.....	47,788	8,380							51,373	8,380	59,753	2,313 63
Lumber, Sawn, in Vessels.....	12	15							12	15	27	1 27
“ “ Rafts.....												
Masts, Spars and Telegraph Poles, in Vessels.....	223								223		223	17 84
Masts, Spars and Telegraph Poles, in Rafts.....												
Railway Ties, in Vessels.....	4,873								5,488		5,488	612 92
“ “ Rafts.....												
Saw Logs.....	469	276							469	276	745	17 02
Staves and Headings, Barrel.....	1								1		1	0 02
“ “ Pipe.....												
“ “ West India.....												
Staves, Salt Barrel.....												
Shingles.....	25	26							25	26	51	8 26
Split Posts and Fence Rails, in Vessels.....	14	12							25	12	37	4 39
“ “ Rafts.....												
Timber, Square, in Vessels.....		20								20	20	0 38
“ “ Rafts.....												
Traverses.....												
Woodenware and Wood partly manufactured.....	4								4		4	1 40
Total Freight paying Tolls.....	78,779	27,001	4,211						82,990	27,001	109,991	4,401 17
Coal, Free, per O.C.....	2,257								2,257		2,257	
Grand Total Freight.....	81,036	27,001	4,211						85,247	27,001	112,248	

Total Tolls on Vessels.....	2,050 13
“ Passengers.....	115 56
“ Free coal.....	\$ 60 24
Wharfage and Storage.....	34 70
Fines and Damages.....	12 40
Other receipts.....	105 40
Total Revenue, exclusive of Hydraulic Rents	6,719 36

B. H. TEAKLIPS,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

APPENDIX A—Continued.

No. (A) 14.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal, and the amount of Revenue collected thereon, during the Season of Navigation in 1888.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls, \$ cts.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Fish.....	41	1,067							41	1,067	1,108	11 08
Flour.....	1,521	391							1,815	391	2,206	22 06
Coal.....	2,171	18,485					294		2,171	18,645	20,816	208 16
Lumber.....	2,660	1,466		160					2,660	1,466	4,126	41 26
Other Agricultural Products.....	4,805	4,295							4,805	4,295	9,100	91 00
Other Merchandise.....	1,476	317							1,476	317	1,793	17 93
Total Freight paying Tolls.....	12,574	26,021		160			294		12,968	26,181	39,149	391 49
Total Tolls on Vessels.....												1,813 08
Passengers.....												2,204 57
Total Revenue, exclusive of Hydraulic Rents....												

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued.

No. (A) 15.—GENERAL STATEMENT showing the Quantity of each Article transported on the Newcastle District Canals, and the amount of Revenue collected, during the Season of Navigation in 1888.

ARTICLES.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Bark.....	45								45		45	\$ 0 75
Firewood.....	10,878								10,878		10,878	113 28
Lumber, Sawn.....	434								434		434	3 24
Railway Ties.....	127								127		127	4 73
Sawlogs.....	1,850								1,850		1,850	33 00
Shingles.....	79								79		79	10 42
Square Timber.....	480	200							480	200	680	14 00
Stone, unwrought.....	706								706		706	4 70
Total Freight paying Tolls.....	14,599	200							14,599	200	14,799	184 12
Tolls on vessels.....												73 00
Total Revenue, exclusive of Hydraulic Rents.....												257 12

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX

No. (A) 16.—STATEMENT of Traffic on the undermentioned Canals, and

ARTICLES.	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 1.</i>		\$ cts.		\$ cts.
Canadian Vessels, steam.....	236,533	3,344 70	606,104	3,653 83
United States Vessels, steam.....	210,312	3,161 45	16,238	113 76
Canadian Vessels, sail.....	241,420	4,489 96	801,693	8,637 47
United States Vessels, sail.....	140,006	3,117 42	76,061	592 25
Total, Class No. 1.....	828,271	14,113 53	1,500,096	12,997 31
<i>Class No. 2.</i>	No.		No.	
Passengers.....	3,402	130 58	50,602	2,478 79
<i>Class No. 3.</i>	Tons.		Tons.	
Bricks.....	51	1 09	8,133	337 10
Brimstone.....	15	2 25		
Cement and Water Lime.....	352	50 48	2,952	405 48
Clay, Lime and Sand.....	948	96 66	27,297	1,091 58
Fish.....	217	32 42	502	55 94
Gypsum.....	885	47 37	3,079	100 93
Iron, Railway.....	93	10 02	10,677	1,504 39
“ Pig.....	1,602	267 75	5,640	827 17
“ all other.....	1,618	282 88	12,386	698 79
Salt.....	316	16 65	3,470	414 39
Steel.....			39	5 80
Stone, for cutting.....	6,535	1,307 00	4,640	490 57
Apples.....	902	33 72	1,667	229 85
Barley.....	5,906	830 04	1,563	59 05
Corn.....	194,886	38,977 20	7,538	223 09
Cotton, Raw.....			10	1 20
Flax and Hemp.....			12	0 95
Flour.....	16,983	2,015 59	5,965	782 60
Hay, pressed.....	38	4 40	1,551	85 28
Meals, all kinds.....	11,927	2,349 83	689	32 01
Oil Cake.....			13	0 49
Oats.....	26,629	5,318 58	1,743	100 18
Pease.....	762	81 60	20,386	419 16
Potatoes.....	17	0 33	133	9 10
Rye.....	811	162 20		
Seeds, all kinds.....	64	12 39	9,267	384 94
Tobacco, Raw.....			8	0 87
Wheat.....	160,963	30,249 63	23,851	478 94
All other Agricultural Products, Vegetable.....	7	0 14	706	68 60
Bones.....			821	99 22
Cattle.....			365	28 07
Hogs.....			22	2 60
Hides and Skins, Horns and Hoofs.....	39	7 80	23	3 10
Horses.....	12	1 03	345	25 61
Lard and Lard Oil.....	84	16 80	206	22 75
Meats, other than Pork.....	59	11 80	49	4 62
Pork.....	345	69 00	474	33 40
Sheep.....			138	12 93
Tallow.....	432	64 50	172	8 62
Wool.....	18	3 60	14	1 81
All other Agricultural Products, Animal.....			547	65 14
Total, Class No. 3.....	433,516	82,324 85	157,093	9,116 35

A—Continued.

the Amount of Tolls collected during the Season of Navigation in 1888.

Chambly Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Newcastle District Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
58,011	190 66	167,964	665 64	70,360	715 96	18,733	374 66	2,387	72 00
378	4 38			514	12 61				
57,688	931 63	211,455	2,954 85	96,106	1,105 11	71,668	1,433 66	200	1 00
127,064	1,714 52	42,868	1,005 78	18,083	216 45	253	5 06		
243,141	2,841 19	422,287	4,626 27	105,063	2,050 13	90,654	1,813 08	2,587	73 00
No.		No.		No.		No.		No.	
3,488	58 28	14,112	189 55	4,193	115 56				
Tons.		Tons.		Tons.		Tons.		Tons.	
5,231	503 78	3	0 06	217	5 97				
		50	4 33	117	3 89				
5,328	535 19	8,223	189 25	23	0 55				
				171	4 12	1,108	11 08		
		10	0 78	6	0 17				
		5	0 30	309	9 27				
105	10 50	116	7 88	189	5 81				
436	37 48	5	0 20	789	24 50				
592	52 54	1	0 04	1,440	48 28				
709	58 05	50	2 90	59	2 48				
373	30 64	471	31 55	275	6 49				
				92	2 68				
377	12 78	23	1 03	432	12 58	2,206	22 06		
2,044	116 83	815	73 78	292	13 59				
		2	0 20	25	0 60				
				1	0 03				
1,050	35 03	1,088	67 11	17	0 44				
192	7 55	1,351	94 63	15	0 38				
		499	32 75	130	3 42				
9	0 30	2	0 20	15	0 37				
12	0 40	27	2 65	35	0 88				
3	0 30								
		40	3 85	326	7 74				
218	7 27	79	4 73	16	0 42	9,100	91 00		
289	28 10	23	2 05	27	1 19				
36	1 20	564	36 24	2	0 06				
		91	6 21						
3	0 10	39	3 68	12	0 43				
27	0 90	244	12 84	10	0 29				
		9	0 77	20	0 49				
		87	8 26	13	0 32				
6	0 20	78	6 57	175	4 42				
138	4 60	426	30 07	7	0 19				
39	3 90	75	5 03	6	0 21				
		1	0 10	5	0 13				
39	1 30	1,762	158 47	744	41 51				
7,256	1,448 94	16,259	788 51	012	205 90	12,414	124 14		

APPENDIX

No. (A) 16.—STATEMENT of Traffic on the undermentioned Canals, and

ARTICLES.	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 4.</i>		\$ cts.		\$ cts.
Ashes, Pot and Pearl	86	17 15	79	15 80
Agricultural Implements			109	13 10
Crockery and Earthenware	150	5 71	576	113 27
Dye Woods and Dye Stuffs			213	11 45
Furniture	44	8 12	694	106 23
Glass, all kinds	22	2 64	531	98 97
Marble	4,663	699 45	22	3 82
Manilla	105	15 75	19	3 80
Molasses	152	21 14	2,252	159 38
Nails	290	25 72	3,463	548 34
Oil, in Barrels	374	24 10	1,770	194 34
Paint	867	126 53	486	65 46
Pitch and Tar			1,435	99 94
Rags	14	2 80	469	50 80
Rosin			1,880	97 80
Soda Ash	400	12 60	1,814	357 07
Steel	887	132 81	182	27 49
Sugar	3,230	451 94	5,404	840 14
Stone, Wrought	299	55 48	281	14 19
Tin	31	0 59	579	100 05
Turpentine			388	22 92
White Lead	6	0 12	129	22 18
Whiting	392	58 80	371	72 58
Whiskey, and all other Spirits	260	38 91	1,002	183 62
Merchandise, not enumerated	24,582	3,669 75	10,581	1,625 92
Total, Class No. 4	36,854	5,370 11	34,729	4,848 66
<i>Class No. 5.</i>				
Bark				
Barrels, Empty	302	36 69	239	20 38
Boat Knees				
Floats	429	5 09	4,240	74 20
Firewood, in Vessels	19,110	838 11	13,578	491 72
do Rafts			186	3 89
Lumber, Sawn, in Vessels	59,604	10,216 98	55,789	2,185 28
do Rafts			69	3 84
Hoops			13	1 40
Railway Ties, in Vessels	1,324	189 51	4,409	104 53
do Rafts				
Masts, Spars and Telegraph Poles, in Vessels			1	0 02
do do Rafts			23,735	594 05
Square Timber, in Vessels	45,275	6,786 43	2,995	37 74
do Rafts	221	24 62	4,405	153 64
Woodenware and Wood partly manufactured	134	53 60	86	21 80
Shingles	18	5 21	49	9 00
Split Posts and Fence Rails, in Vessels			14	4 00
do do Rafts			2	0 40
Saw Logs	10,000	332 71	20,573	470 57
Staves and Headings, Barrel	104	11 68	67	5 20
do Pipe	543	101 43	149	4 88
do West India	1,247	233 18	974	53 84
do Salt Barrel	2	0 15		
Traverses			10,614	27 58
Hop Poles				
Total, Class No. 5	138,313	18,835 39	142,187	4,267 96

A—Continued.
the amount of Tolls collected, &c.—Continued.

Chambly Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Newcastle District Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
		61	11 59	44	10 70				
9	0 90	27	4 27	101	13 95				
6	0 60			22	3 03				
130	12 70								
32	1 20	44	6 12	29	3 30				
				12	2 02				
				14	1 24				
1,659	160 64	2	0 20	80	7 00				
9	0 30	3	0 30	187	17 44				
622	60 48	12	1 45	132	12 99				
8	0 60			2	0 18				
899	89 90			19	1 67				
		50	8 86	15	2 19				
1,969	196 90								
				14	1 58				
12	0 40								
1,309	130 30	4	0 40	476	45 46				
		1	0 19	9	0 80				
342	34 20								
3	0 10	2	0 38	3	0 26				
				33	2 88				
		1	0 19	84	7 54				
2,581	208 66	365	49 29	941	134 03	1,793	17 93		
9,590	897 88	572	83 24	2,217	268 26	1,793	17 93		
				59	1 43			45	0 75
		80	10 17	30	1 82				
333	18 21	26,724	376 51	406	7 11				
300	10 00	67,719	2,640 25	23,463	437 93			10,878	113 28
		7,506	82 06						
91,874	5,348 32	530,985	41,387 27	59,753	2,313 63			434	3 24
		2,221	150 89	27	1 27				
		29	2 50						
12,913	990 44	1,705	164 60	5,488	612 92			127	4 73
		1,784	165 29						
				223	17 84				
126	12 59	8,080	92 40	20	0 38			680	14 00
				8	1 40				
38	5 90	419	277 08	51	8 26			79	10 42
8	0 54			37	4 99				
		11	2 32						
		10,145	255 62	745	17 02			1,850	33 00
		1	0 15	1	0 02				
14	0 24	220	1 35						
				66	9 50				
105,606	6,386 24	657,629	45,608 46	90,377	3,435 52			14,093	179 42

APPENDIX

No. (A) 38.—STATEMENT of Traffic in the undermentioned

ARTICLES.	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
<i>Special Class.</i>		\$ cts.		\$ cts.
Coal	223,871	43,901 23	143,624	19,650 30
Kryolite or Chemical Ore			362	18 10
Iron Ore	16,872	843 60		
Stone, unwrought, not suitable for cutting	6,278	536 50	7,114	209 40
Ice				
<i>Total, Special Class.</i>	247,021	45,281 33	151,100	19,877 80
<i>Total Freight and Tolls.</i>	855,704	166,055 79	485,109	53,586 87
Timber and other Wood, Free	3,786	182 91	18,172	2,154 74
Wheat, Corn, Flour, Iron, Salt, Coal, &c., &c., Free	19,310	2,896 50	278,318	9,973 03
<i>Grand Total, Passengers and Tonnage of Vessels not included</i>	878,800	169,135 20	781,599	65,714 64

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th Nov., 1889.

A—Continued.

Canals, and the Amount of Tolls collected, &c.—Concluded.

Chambly Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Newcastle District Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
108,994	10,650 09	327	10 90	9,523	417 74	20,816	208 16	.....	.....
.....	.....	830	41 50	1,171	58 55	.....	.....	.....	.....
.....	.....	.....	.....	691	17 20	.....	.....	706	4 70
.....
108,994	10,650 09	1,157	52 40	11,385	493 49	20,816	208 16	706	4 70
.....
241,446	22,282 62	675,617	51,348 43	109,991	6,566 86	39,149	2,204 57	14,799	257 12
.....	.....	17,632	254 83	.....	.....	.....	.....	.....	.....
307	30 70	.....	.....	2,257	60 24	.....	.....	.....	.....
.....
241,753	22,313 32	693,429	51,603 26	112,248	6,627 10	39,149	2,204 57	14,799	257 12

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX A—Continued.

No. (A) 18.—STATEMENT showing the Amount of Tolls accrued each month during the Season of Navigation ended 31st December, 1888.

Canals and Offices.	January.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Amount of Tolls.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
WELLAND CANAL.											
Chippewa.....	2 20	3 42	10 72	17 13	5 40	8 20	23 87	14 22	7 81	92 97
Colborne.....	1,537 72	13,250 86	18,137 26	15,402 93	20,130 22	16,433 40	15,684 23	10,145 83	16 16	110,798 61
Dalhousie.....	1,304 89	10,173 50	8,439 89	6,823 62	6,363 96	6,963 96	7,062 49	4,582 12	0 76	52,761 71
Dunnville.....	5 25	27 84	85 78	32 09	72 08	.....	69 36	70 20	.....	362 60
Maitland.....	7 75	3 75	14 17	13 35	29 83	0 54	0 25	.....	69 64
Robinson.....	76 90	288 90	225 55	239 64	169 41	120 62	129 14	58 77	18 66	1,327 59
St. Catharines.....	58 51	150 74	74 64	82 92	75 57	105 06	63 51	27 11	4 61	642 67
Total, Welland Canal.....	2,985 47	23,903 01	27,037 25	23,199 70	27,289 65	23,661 07	23,033 14	14,898 50	48 00	166,055 79
ST. LAWRENCE CANALS.											
Beauharnois.....	51 28	327 35	116 64	73 25	132 11	148 17	34 79	.....	883 59
Cardinal.....	43 54	97 30	108 05	156 93	133 98	70 34	188 10	4 85	803 09
Cornwall.....	880 95	2,362 43	2,600 08	2,259 25	3,095 08	748 84	1,900 77	75 44	13,922 84
Kingston.....	2,237 43	1,502 29	2,232 49	2,370 32	1,764 36	645 06	293 07	.....	11,045 02
Lachine.....	211 23	336 53	363 69	525 51	504 89	236 73	258 96	0 25	2,327 79
Montreal.....	2,945 41	4,886 37	4,171 23	4,649 78	3,627 56	3,537 33	1,586 86	.....	24,404 54
Total, St. Lawrence Canals.....	6,369 84	9,512 27	9,592 18	10,035 04	9,257 98	4,476 47	4,262 55	80 54	53,586 87
CHAMBLY CANAL.											
Chamby.....	224 05	1,424 95	1,103 60	1,291 69	1,052 65	1,315 21	807 37	.....	7,219 52
St. Johns.....	2,459 63	2,157 47	2,029 08	2,194 69	2,816 99	1,937 35	943 01	.....	14,538 22
St. Ours.....	2 65	43 18	65 99	76 15	77 18	81 20	99 53	79 00	.....	524 88
Total, Chamby Canal.....	2 65	2,726 86	3,648 41	3,208 83	3,563 56	3,950 84	3,352 09	1,829 38	.....	22,282 62
OTTAWA CANALS.											
Ottawa.....	5,025 59	5,601 25	4,974 82	4,603 02	3,557 64	4,688 19	1,813 38	.....	30,964 39
Carillon.....	56 72	255 12	179 33	42 00	18 74	54 77	24 66	.....	631 34

Grenville.....	3,012 01	2,808 09	2,768 28	1,903 90	2,705 94	1,856 07	73 07	18,239 36
St. Ann's.....	208 58	208 34	232 35	220 74	256 11	131 99	.....	1,513 34
Total, Ottawa Canal.....	8,902 90	8,170 58	7,645 65	5,701 02	7,705 01	3,826 10	73 07	51,348 43
RIDEAU CANAL.								
Kingston Mills.....	136 97	354 17	261 29	263 22	169 89	50 77	.....	1,401 74
Ottawa.....	434 77	1,006 57	765 25	549 27	573 49	284 20	.....	4,580 26
Smith's Falls.....	98 96	101 75	140 61	41 21	86 50	34 68	.....	584 86
Total, Rideau Canal.....	670 70	1,462 49	1,167 15	853 70	829 88	369 65	.....	6,566 86
ST. PETER'S CANAL.								
St. Peter's.....	2 69	1 84	317 14	313 81	345 20	263 60	99 93	2,204 57
NEWCASTLE DISTRICT CANALS.								
Bobcaygeon.....	5 70	23 09	32 19	56 47	8 07	.....	.....	161 34
Peterborough.....	11 00	10 50	10 50	7 00	10 00	11 10	.....	76 60
Hastings.....	.....	2 56	7 50	2 98	3 10	2 10	.....	19 18
Total, Newcastle District Canals.....	16 70	36 09	50 19	66 45	21 17	13 20	.....	257 12
Grand Total.....	2 69	2,989 96	51,054 56	43,804 87	39,762 96	25,462 98	301 54	302,302 26

NOTE.—Amount of tolls on grain through Welland Canal, refunded as per Order in Council 20th April, 1888, \$30,580.02.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX A—Continued.

No. (A) 19.—GENERAL STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals during the Season of Navigation ended 31st December, 1888, and the amount of Tolls collected thereon.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
WELLAND CANAL.													
Canadian Vessels, steam	745	54,617	57,349	55,235	3,181	582	.....	5,163	60,406	115,597	120,936	236,533	3,344 70
“ sail.....	1,150	49,250	52,863	55,072	9,644	634	.....	17,076	56,881	122,032	119,388	241,420	4,489 96
Total Canadian.....	1,895	103,867	110,212	110,307	12,825	1,216	.....	22,239	117,287	237,629	240,324	477,953	7,834 66
United States Vessels, steam	303	18	20	1,478	433	104,517	100,046	374	3,426	106,387	103,925	210,312	3,161 45
“ sail.....	449	406	115	2,744	979	64,848	48,768	.....	22,146	67,998	72,008	140,006	3,117 42
Total United States.....	752	424	135	4,222	1,412	169,365	148,814	374	25,572	174,385	175,933	350,318	6,278 87
Grand Total, Welland Canal.....	2,647	104,291	110,347	114,529	14,237	170,581	148,814	22,613	142,859	412,014	416,257	828,271	14,113 53
ST. LAWRENCE CANALS.													
Canadian Vessels, steam.....	2,880	315,450	271,940	16,492	.....	.....	.....	.....	2,222	331,942	274,162	606,104	3,653 83
“ sail.....	4,918	458,541	278,865	22,703	.....	36	.....	.....	41,548	481,280	320,413	801,693	8,637 47
Total Canadian	7,798	773,991	550,805	39,195	.....	36	.....	.....	43,770	813,222	594,575	1,407,797	12,291 30
United States Vessels, steam	411	324	640	1,075	22	7,007	6,025	22	1,123	8,428	7,810	16,238	113 76
“ sail.....	796	840	12,585	1,314	7,133	1,342	1,256	48,505	3,086	52,001	24,060	76,061	592 25
Total United States.....	1,207	1,164	13,225	2,389	7,155	8,349	7,281	48,527	4,209	60,429	31,870	92,299	706 01
Grand Total, St. Lawrence Canals.....	9,005	775,155	564,030	41,584	7,155	8,385	7,281	48,527	47,979	873,651	626,445	1,500,096	12,297 31

[1889]

[1889]

CHAMBLY CANAL.									
Canadian Vessels, steam.....	355	28,974	28,131	9	.....	.....	.....	897	28,983
“ sail.....	619	9,801	10,818	7,813	1,334	.....	.....	27,922	17,614
Total Canadian.....	974	38,775	38,949	7,822	1,334	.....	.....	28,819	46,597
United States Vessels, steam.....	10	230	.....	138	.....	.....	.....	10	368
“ sail.....	1,293	416	1,675	34,290	5,861	.....	.....	84,822	34,706
Total United States.....	1,303	646	1,675	34,428	5,861	.....	.....	84,832	35,074
Grand Total, Chamblay Canal.....	2,277	39,421	40,624	42,250	7,195	.....	.....	113,651	81,671
OTTAWA CANALS.									
Canadian Vessels, steam.....	1,029	54,703	112,477	.....	784	.....	.....	.....	54,703
“ sail.....	1,709	12,237	179,890	.....	19,328	.....	.....	.....	12,237
Total Canadian.....	2,738	66,940	292,367	.....	20,112	.....	.....	.....	66,940
United States Vessels, steam.....	436	5,627	.....	.....	35,619	.....	.....	877	6,504
“ sail.....	436	5,627	745	.....	35,619	.....	.....	877	6,504
Total United States.....	872	11,254	745	.....	71,238	.....	.....	1,754	12,208
Grand Total, Ottawa Canals.....	3,174	72,567	293,112	.....	55,731	.....	.....	877	73,444
RIDEAU CANAL.									
Canadian Vessels, steam.....	1,141	33,552	36,630	178	.....	.....	.....	.....	33,730
“ sail.....	1,388	46,835	48,564	707	.....	.....	.....	.....	47,542
Total Canadian.....	2,529	80,387	85,194	885	.....	.....	.....	.....	81,272
United States Vessels, steam.....	50	251	263	.....	.....	.....	.....	.....	251
“ sail.....	170	6,114	10,583	1,386	.....	.....	.....	.....	7,500
Total United States.....	220	6,365	10,846	1,386	.....	.....	.....	.....	7,751
Grand Total, Rideau Canal.....	2,749	86,752	96,040	2,271	.....	.....	.....	.....	89,023
St. PETER'S CANAL.									
Canadian Vessels, steam.....	111	10,428	8,175	.....	.....	.....	.....	130	10,558
“ sail.....	1,470	36,736	34,651	.....	97	.....	.....	184	36,920
Total Canadian.....	1,581	47,164	42,826	.....	97	.....	.....	314	47,478

APPENDIX A—Continued.

No. (A) 19.—(GENERAL STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—Concluded)

Vessels.	Total Number	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.	
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			
ST. PETERS'S CANAL—Continued.														
United States Vessels, steam.....	3	78	175							78	175	253	\$ cts.	
“ sail.....													5 06	
Total United States	3	78	175							78	175	253	5 06	
Grand Total, St. Peter's Canal.....	1,584	47,242	43,001		97			314		47,556	43,098	90,654	1,813 08	
NEWCASTLE DISTRICT CANALS.														
Canadian Vessels, steam.....	144	2,166	221							2,166	221	2,387	72 00	
“ sail.....	2		200								200	200	1 00	
Total Canadian.....	146	2,166	421							2,166	421	2,587	73 00	
United States Vessels, steam.....														
“ sail.....														
Total United States.....														
Grand Total, Newcastle District Canals...	146	2,166	421							2,166	421	2,587	73 00	

RECAPITULATION.												
CANADIAN VESSELS.												
Steam and Sail.												
Welland	1,895	103,867	110,212	110,307	12,825	1,216	22,239	117,287	237,629	240,324	477,953	7,834 66
St. Lawrence	7,798	773,991	550,805	39,195	1,334	36	43,770	813,222	813,222	594,375	1,407,797	12,291 30
Chambly	374	38,775	38,949	7,822	20,112	.....	28,819	66,597	46,597	69,102	115,699	1,122 29
Ottawa	2,738	66,940	292,367	.....	885	.....	.....	81,272	66,940	312,479	379,419	3,620 49
Rideau	2,529	80,387	85,194	.....	97	.....	314	47,478	81,272	85,194	166,466	1,821 07
St. Peter's	1,581	47,164	42,826	.....	.....	.....	.....	47,478	47,478	42,923	90,401	1,808 02
Newcastle District Canals	146	2,166	421	.....	.....	.....	.....	2,166	2,166	421	2,587	73 00
Total Canadian	17,661	1,113,290	1,120,774	158,209	34,368	1,252	22,553	189,876	1,295,304	1,345,018	2,640,322	28,570 83
UNITED STATES VESSELS.												
Steam and Sail.												
Welland	752	444	135	4,222	1,412	169,365	148,814	25,572	174,385	175,333	350,318	6,278 87
St. Lawrence	1,207	1,164	13,225	2,389	7,155	8,349	7,281	4,209	60,429	31,370	92,209	706 01
Chambly	1,303	646	1,675	34,428	5,861	.....	.....	84,832	35,074	92,368	127,442	1,718 90
Ottawa	436	5,627	745	.....	35,619	.....	877	.....	6,504	36,364	42,868	1,005 78
Rideau	220	6,365	10,846	1,386	.....	.....	.....	.....	7,751	10,846	18,597	229 06
St. Peter's	3	78	175	.....	.....	.....	.....	.....	78	175	253	5 06
Total United States	3,921	14,304	26,801	42,425	50,047	177,714	156,095	114,613	284,221	347,556	631,777	9,943 68
Grand Total Canadian and United States	17,682	1,127,594	1,147,575	200,634	84,415	178,966	156,095	304,489	1,579,525	1,692,574	3,272,099	38,514 51

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

APPENDIX A—Continued.

No. (A) 19½.—COMPARATIVE STATEMENT of Grand Total Freight passed through the Undermentioned Canals during the Seasons of Navigation of 1887 and 1888, and the Amount of Tolls collected on the same, including Tolls on Vessels and Passengers.

Canals.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Canals.		Total. Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1887.												
Welland Canal.....	23,849	76,130	32,518	18,557	151,074	189,427	34,400	251,873	241,931	535,987	777,918	144,561 75
St. Lawrence Canals.....	190,804	534,165	11,566	5,997	731	3,101	51,884	88,734	254,985	631,997	886,982	60,195 12
Chambly Canal.....	7,655	6,115	92,627					116,875	100,282	122,990	223,272	20,468 94
Rideau Canal.....	76,039	14,458	1,981						78,020	14,458	92,478	5,417 21
Ottawa Canals.....	638	504,400		178,009					638	682,409	683,047	54,997 02
St. Peter's Canal.....	22,183	18,991							22,183	18,991	41,174	2,508 30
Newcastle District Canals.....	15,480	165							15,480	165	15,645	330 16
1888.												
Welland Canal.....	21,968	119,827	39,153	23,016	213,689	221,064	22,451	217,632	297,261	581,539	878,800	166,055 79
St. Lawrence Canals.....	214,420	411,840	10,079	1,419	718	2,365	58,845	81,913	284,062	497,537	731,599	53,586 87
Chambly Canal.....	10,276	5,999	84,684	11,961			21	128,812	94,981	146,772	241,753	22,282 62
Rideau Canal.....	81,036	27,001	4,211						85,247	27,001	112,248	6,566 86
Ottawa Canals.....	192	555,372		137,683					192	693,057	693,249	51,348 43
St. Peter's Canal.....	12,674	26,021		160			294		12,968	26,181	39,149	2,204 57
Newcastle District Canals.....	14,599	200							14,599	200	14,799	257 12

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

APPENDIX A—Continued.

No. 25.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1888.

WELLAND AND ST. LAWRENCE CANALS.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	29	232	22	176	13	104		
10	8	80	11	110	5	50		
15	9	135	3	45	3	45	1	15
20	11	220	7	140	6	120	1	20
25	12	300	4	100	3	75	2	50
30	19	570	1	30	4	120	1	30
35	13	455	16	560	3	105		
40	5	200	26	1,040	1	40	1	40
45	9	405	6	270	1	45		
50	2	100	13	650	2	100		
55	2	110	5	275	1	55		
60	5	300	6	360				
65	3	195	6	390	1	65		
70	4	280	3	210			1	70
75	2	150	11	825			3	225
80	3	240	8	640			2	160
85	6	510	14	1,190			10	850
90	1	90	21	1,890			24	2,160
95	3	285	20	1,900			65	6,175
100	2	200	24	2,400			64	6,400
105	8	840	26	2,730			36	3,780
110	2	220	15	1,650	2	220	27	2,970
115	2	230	15	1,725			2	230
120	1	120	7	840	2	240	4	480
125	1	125	14	1,750			1	125
130	1	130	13	1,690			1	130
135			9	1,215				
140	1	140	11	1,540			1	140
145	1	145	9	1,305				
150	1	150	26	3,900				
155	3	465	26	4,030	1	155		
160	2	320	17	2,720			2	320
165	2	330	11	1,815				
170			4	680				
175	1	175	8	1,400				
180			3	540				
185	1	185	9	1,665				
190	1	190	4	760				
195	1	195	6	1,170			1	195
200	3	600	5	1,000	1	200		
205			2	410			2	410
210	3	630	3	630			1	210
215			2	430				
220			2	440			1	220
225	1	225	5	1,125			1	225
230	1	230	4	920	1	230	1	230
235	1	235	2	470			2	470
240	1	240	4	960				
245	2	490	2	490			1	245
250								
255			1	255			2	510
260			2	520			2	520
265			1	265	1	265	2	530
270	1	270	2	540			1	270

APPENDIX A—Continued.

No. 25.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals, &c.—Continued.

WELLAND AND ST. LAWRENCE CANALS—Concluded

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
275			5	1,375			6	1,650
280	1	280					1	280
285			4	1,140			7	1,995
290			2	580				
295	2	590	2	590			3	885
300	2	600	3	900			3	900
305	2	610	5	1,525			4	1,220
310			5	1,550			2	620
315	1	315	4	1,260			5	1,575
320			7	2,240			3	960
325			5	1,725			2	650
330			7	2,310			3	990
335	1	335	4	1,340			1	335
340			4	1,360			1	340
345	1	345						
350			3	1,050			1	350
355					1	355	1	355
360			2	720				
365			4	1,460				
370			2	740			1	370
375			3	1,125			1	375
380								
385	1	385	1	385			1	385
390	1	390						
395	3	1,185						
400	1	400	1	400				
405								
410	2	820	1	410				
415			1	415			1	415
420								
425			2	850				
430	1	430						
435	1	435	2	870				
440	2	880	2	880				
445								
450								
455	1	455	1	455				
460								
465			1	465				
470								
475							1	475
480								
485	1	485	1	485			2	970
490								
495							2	990
500	1	500	1	500				
505								
510	3	1,530						
515			1	515				
520			2	1,040				
525					1	525		
530	1	530						
535								
540	2	1,080			1	540		
545								

APPENDIX A—*Continued.*

No. 25.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals, &c.—*Concluded.*

RIDEAU, OTTAWA AND CHAMBLY CANALS—*Concluded.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
40	3	120	4	160				
45	1	45	4	180				
50	4	200	8	400	2	100		
55	3	165	3	165	1	55		
60	3	180	6	360				
65	2	130	2	130			2	130
70	1	70	3	210				
75	1	75	10	750			3	225
80			7	560			4	320
85	2	170	11	935			11	935
90	1	90	8	720			38	3,420
95	3	285	29	2,855			95	9,025
100	2	200	40	4,000			108	10,800
105	2	210	23	2,415			47	4,935
110	1	110	7	770			33	3,630
115			11	1,265			11	1,265
120			9	1,080			6	720
125	1	125	10	1,250				
130			7	910			1	130
135			6	810				
140			8	1,120	1	140		
145	1	145	12	1,740				
150	1	150	27	4,050				
155			29	4,495				
160			14	2,240				
165			10	1,650			1	165
170			8	1,360				
175			1	175				
180								
185	1	185	6	1,110				
190	1	190	2	380				
195			1	195				
200			1	200				
205			1	205				
210	1	210						
220								
225			1	225				
230	1	230						
235			1	235				
240								
245			1	245				
250								
255								
260			1	260				
265								
270								
275			1	275				
332	1	332						
345	2	690						
397	1	397						
Total	116	6,187	592	42,525	24	602	360	35,796

B. H. TEAKLES,

Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS, OTTAWA, 30th November, 1889.

APPENDIX A—Continued.

No. 26.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1888.

WELLAND AND ST. LAWRENCE CANALS.

CANADIAN.						UNITED STATES.					
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	250 to 1,172 tons ..	51	26,598	1	250 to 1,001 tons ..	97	34,434	1	250 to 802 tons	64	21,339
2	200 to 249 do ..	12	2,650	2	200 to 249 do ..	31	6,875	2	200 to 249 do	9	2,010
3	150 to 199 do ..	12	2,010	3	150 to 199 do ..	114	18,680	3	150 to 199 do	3	515
4	100 to 149 do ..	19	2,150	4	100 to 149 do ..	143	16,845	4	100 to 149 do	136	14,255
5	50 to 99 do ..	31	2,260	5	50 to 99 do ..	107	8,330	5	50 to 99 do	105	9,640
6	Under 50 do ..	115	2,597	6	Under 50 do ..	96	2,471	6	Under 50 do	6	155
	Total.....	240	38,265		Total.....	588	87,635		Total.....	323	47,914

RIDEAU, OTTAWA AND CHAMBLY.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.	Class.	Sailing Vessels.	No.	Tonnage.
1	250 to 397 tons	4	1,419	1	250 to 275 tons	2	535	1	250 to 300 tons ....	.....	.....
2	200 to 249 do	2	440	2	200 to 249 do	5	1,110	2	200 to 249 do ....	.....	.....
3	150 to 199 do	3	525	3	150 to 199 do	98	15,655	3	150 to 199 do ....	.....	.....
4	100 to 149 do	7	790	4	100 to 149 do	133	15,300	4	100 to 149 do ....	.....	.....
5	50 to 99 do	20	1,365	5	50 to 99 do	87	7,085	5	50 to 99 do ....	.....	.....
6	Under 50 do	125	1,648	6	Under 50 do	267	2,780	6	Under 50 do ....	.....	.....
	Total.....	161	6,187		Total.....	592	42,525		Total.....	369	35,796

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

No. 27.—RATES of Tolls on the Canals
WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA AND CHAMBLY

The Rates of Tolls are divided into Five Classes, as under, and are per ton, unless otherwise specified.								
	Welland Canal, west-ward.	Welland Canal east-ward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals and St. Ann's Lock, each way.	Ottawa to St. John's each way.
<i>Class No. 1.</i>	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Vessels, Steam per ton.	0 01 $\frac{1}{2}$	0 01 $\frac{1}{2}$	0 02 $\frac{1}{2}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 01 $\frac{1}{2}$	0 00 $\frac{5}{8}$	0 01 $\frac{1}{2}$
do Sail and other	0 02 $\frac{1}{4}$	0 02 $\frac{1}{4}$	0 03 $\frac{1}{4}$	0 01 $\frac{1}{2}$	0 00 $\frac{3}{4}$	0 02 $\frac{1}{4}$	0 01	0 02 $\frac{3}{4}$
<i>Class No. 2.</i>								
Passengers, 21 years of age and upwards .	0 10	0 10	0 20	0 10	0 05	0 08	0 02 $\frac{1}{4}$	0 09 $\frac{3}{4}$
do under 21 years each	0 05	0 05	0 10	0 05	0 02	0 04	0 01 $\frac{1}{4}$	0 04 $\frac{3}{4}$
<i>Class No. 3.</i>								
Bricks, Cement and Water Lime.....	15	0 20	0 20	0 15	0 10	0 07	0 06	0 19 $\frac{3}{4}$
Clay, Lime and Sand.....								
Brimstone.....								
Corn.....								
Flour.....								
Iron, Railway.....								
do Pig								
do all others.....								
Plaster, Gypsum.....								
Salt.....								
Salt Meats or Fish, in barrel or otherwise.....								
Agricultural Products, Vegetable, not enumerated.								
Agricultural Products, Animal, not enumerated...								
Stone, for Cutting.....								
Wheat.....								
<i>Class No. 4.</i>								
All other articles, not enumerated	0 15	0 20	0 20	0 20	0 10	0 26	0 14	0 29
<i>Class No. 5.</i>								
Bark.....	0 20	0 20	0 20	0 15	0 10	0 07	0 06	0 19 $\frac{1}{2}$
Barrels, empty, each.....	0 02	0 02	0 02	0 02	0 02	0 02	0 01	0 03 $\frac{1}{2}$
Boat Knees, each	0 05	0 05	0 05	0 02	0 02	0 02	0 01	0 03 $\frac{1}{2}$
Floats, per 1,000 lineal feet.....	1 40	1 40	1 40	1 40	1 20	1 05	0 50	2 05
Firewood, per cord, in Vessels.....	0 20	0 20	0 20	0 20	0 10	0 15	0 08	0 23
do do Rafts.....	0 25	0 25	0 25	0 25	0 15	0 19	0 09	0 30 $\frac{1}{4}$
Hoops.....	0 25	0 25	0 25	0 20	0 15	0 15	0 10	0 30
Masts and Spars, Telegraph Poles, per ton of 40 cubic feet, in Vessels.....	0 15	0 15	0 15	0 05	0 05	0 08	0 07	0 13 $\frac{1}{2}$
Masts and Spars, Telegraph Poles, per ton, of 40 cubic feet, in Rafts.....	0 20	0 20	0 20	0 10	0 10	0 15	0 10	0 22 $\frac{1}{2}$
Railway Ties, in Vessels, each.....	0 01	0 01	0 01	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 01 $\frac{3}{4}$
do Rafts, each.....	0 02	0 02	0 02	0 01	0 01	0 01	0 01	0 02 $\frac{1}{4}$
Sawed Stuff, Boards, Plank, Scantling and Sawed Timber, per M. feet, board measure, in Vessels.	0 30	0 30	0 30	0 15	0 10	0 11 $\frac{1}{4}$	0 06 $\frac{3}{4}$	0 20
Sawed Stuff, Boards, Plank, Scantling and Sawed Timber, per M. feet, board Measure, in Rafts.	0 60	0 60	0 60	0 30	0 20	0 19	0 09	0 36 $\frac{1}{2}$
Square Timber, per M. cubic feet, in Vessels.....	3 00	3 00	3 00	1 00	1 00	0 56	0 44	1 69
Square Timber, per M. cubic feet, in Rafts.....	4 50	4 50	4 50	2 00	2 00	1 12	0 63	3 13
Waggon Stuff, Woodenware and Wood, partly manufactured, per ton of 40 cubic feet.....	0 40	0 40	0 40	0 40	0 25	0 30	0 20	0 55
Shingles, per M.....	0 06	0 06	0 06	0 06	0 04	0 04 $\frac{1}{2}$	0 02 $\frac{1}{2}$	0 08
Split Posts and Fence Rails, per M., in Vessels...	0 40	0 40	0 40	0 40	0 20	0 23	0 12	0 42
do do do Rafts.....	0 80	0 80	0 80	0 80	0 40	0 38	0 17	0 77
Sawlogs, each standard log.....	0 08	0 08	0 08	0 08	0 05	0 06	0 06	0 13

of the Dominion of Canada, 1888-89.

CANALS (TRENT VALLEY CANAL, O. C., 25TH JULY, 1888.)

1st SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Whitlaw's to Hastings.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Bobcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Whitlaw's.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₄ 0 01	0 00 ³ / ₁₆ 0 00 ¹ / ₄
0 01 0 00 ¹ / ₂	0 01 0 00 ¹ / ₂	0 01 0 00 ¹ / ₂	0 01 0 00 ¹ / ₂	0 04 0 02	0 01 0 00 ¹ / ₂
0 01	0 01	0 01	0 01	0 04	0 01
0 03	0 03	0 03	0 03	0 12	0 03
0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 04 0 01 0 01 0 52 0 10 0 14 0 08	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02
0 02	0 02	0 02	0 02	0 08	0 02
0 01 0 00 ¹ / ₈ 0 00 ¹ / ₄	0 01 0 00 ¹ / ₈ 0 00 ¹ / ₄	0 01 0 00 ¹ / ₈ 0 00 ¹ / ₄	0 01 0 00 ¹ / ₈ 0 00 ¹ / ₄	0 04 0 00 ¹ / ₂ 0 01	0 01 0 00 ¹ / ₈ 0 00 ¹ / ₄
0 03	0 03	0 03	0 03	0 10	0 03
0 04 0 07 0 14	0 04 0 07 0 14	0 04 0 07 0 14	0 04 0 07 0 14	0 14 0 28 0 56	0 04 0 07 0 14
0 04 0 00 ³ / ₄ 0 03 0 05 0 00 ³ / ₄	0 04 0 00 ³ / ₄ 0 03 0 05 0 00 ³ / ₄	0 04 0 00 ³ / ₄ 0 03 0 05 0 00 ³ / ₄	0 04 0 00 ³ / ₄ 0 03 0 05 0 00 ³ / ₄	0 16 0 03 0 12 0 20 0 03	0 04 0 00 ³ / ₄ 0 03 0 05 0 00 ³ / ₄

No. 47.—RATES of Tolls on the Canals of the
WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA AND CHAMBLY CANALS,

The Rates of Tolls are divided into Five Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, west- ward.		Welland Canal, east- ward.		Lake Erie to Montreal.		St. Lawrence Canals, each way.		Chambly Canal and St. Ours Lock, each way.		Rideau Canal, each way.		Ottawa Canals and St. Ann's Lock, each way.		Ottawa to St. John's each way.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
<i>Class No. 5—Concluded.</i>																
Staves and Headings, Barrel, per M.....	0	40	0	40	0	40	0	20	0	15	0	15	0	10	0	30
do Pipe do	1	50	1	50	1	50	1	00	1	00	0	75	0	50	1	75
do West India, per M.....	0	75	0	75	0	75	0	60	0	25	0	45	0	25	0	65
do Salt Barrel, Sawn or Cut, per M.....	0	08	0	08	0	08	0	04	0	03	0	03	0	02	0	06
Traverses, per 100 pieces.....	0	50	0	50	0	50	0	50	0	40	0	38	0	15	0	67½
Hop Poles, per 1,000 pieces.....	2	00	2	00	2	00	2	00	1	50	1	50	0	65	2	65
<i>Special Class.</i>																
Gypsum, crude (per O.C., 28th October, 1882).....	0	15	0	05	.....	0	05	westward		.....	.....	.....	.....	.....	.....	.....
Coal.....	0	20	0	20	0	20	0	15	0	10	0	08	0	05	0	17¾
Stone, unwrought, corded, and not suitable for cutting, per cord.....	0	75	0	75	0	75	0	60	0	37½	0	28	0	24	0	77½
Kryolite, Iron Ore or Chemical Ore	0	05	0	05	0	05	0	05	0	05	0	05	0	05	0	05
Ice.....	0	05	0	05	0	05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Dominion of Canada, 1888—*Concluded.*

TRENT VALLEY CANAL, O.C., 25TH JULY, 1888.)—*Concluded.*

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Whitlaw's to Hastings.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Bobcaygeon.	Tolls Charge- able at Buckhorn.	Tolls Charge- able at Burleigh.	Tolls Charge- able at Fenelon Falls.	Tolls Charge- able at Whitlaw's.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
0 02	0 02	0 02	0 02	0 08	0 02
0 10	0 10	0 10	0 10	0 40	0 10
0 05½	0 05½	0 05½	0 05½	0 22	0 05½
0 00½	0 00½	0 00½	0 00½	0 02	0 00½
0 05	0 05	0 05	0 05	0 20	0 05
0 20	0 20	0 20	0 20	0 80	0 20
Free.	Free.	Free.	Free.	Free.	Free.
0 01	0 01	0 01	0 01	0 04	0 01
0 03½	0 03½	0 03½	0 03½	0 14	0 03½
0 00¾	0 00¾	0 00¾	0 00¾	0 03	0 00¾
Free.	Free.	Free.	Free.	Free.	Free.

No. 27—*Continued.*NOTICE—*Continued.*

NOTE.—Coal to pass up all Canals, except the Welland Canal, free of Toll, as per Order in Council, 7th June, 1869.

Logs, Lumber or other produce shall pass free of Toll down the Chippawa Creek, between the aqueduct and Port Robinson, as per O. C., 18th May, 1863.

Iron Ore, Kryolite or Chemical Ore, through one section, or all the Canals, per ton, 5 cents.

All goods having paid full Toll through the whole line of the St. Lawrence Canals, or through the Lachine Canal, St. Ann's Lock, or Ottawa and Rideau Canals, shall be allowed to pass free through the Welland Canal; and if Tolls have been paid at the Chambly Canal, such Tolls shall be refunded at Montreal or Kingston Mills; and having paid full Tolls through the Welland Canal, they shall be allowed to pass free through the St. Lawrence Canals, or through the Ottawa and Rideau Canals, St. Ann's Lock, the Lachine Canal and the Chambly Canal; Provided always, that the articles to be entitled to above exemptions shall go downwards through the whole length of the Canal to Montreal, or pass upward from Montreal through the whole length of the St. Lawrence Canals, or the Ottawa and Rideau Canals to Lake Ontario.

All articles, goods or merchandise not enumerated above, to be charged to class No. 4.

No Let Passes to be issued to Steam Tugs or other small vessels for less than 25 cents, as a minimum charge; but such vessels, not carrying freight or passengers, can obtain, on payment of \$30, a season "Let Pass," which will pass them up and down the Canals as often as desired.

Goods shipped to any port west of the St. Lawrence Canals, Tolls upon which have already been paid for passage through such Canals, may be re-shipped from such ports and be passed through the Welland Canal free of Tolls, in the same way as if they had been shipped through direct in the first instance; and goods going eastward, having paid Welland Canal Tolls, may be transhipped at any port on Lake Ontario, and thereafter pass free through the St. Lawrence Canals, as if they had been shipped through direct in the first instance.

NOTICES.

CONTRACTORS' VESSELS AND CARGOES FREE.

O. C., 22nd April, 1884.—The Committee, on the recommendation of the Minister of Inland Revenue, advise that the Order in Council, dated 18th September, 1873, authorizing that all vessels owned or chartered by persons having contracts for the enlargement or repair of any of the Canals and employed by them in removing earth or carrying materials necessary for the prosecution of such works, be entitled to pass through such Canals free of Tolls, be amended by adding thereto after the last word "Tolls" the words "upon such vessel and cargo," and that the said amendment be deemed to apply from the date of the aforesaid Order in Council.

SPECIAL RATES FOR CEREALS GOING EAST.

O. C., 20th April, 1888.—On the recommendation of the Minister of Railways and Canals, and under the provisions of the 13th Section of Chapter 37 of the Revised Statutes of Canada, intituled: "An Act respecting the Department of Railways and Canals;" His Excellency in Council has been pleased to order, and it is hereby ordered, that the special rates of toll of two (2) cents per ton adopted last year for the passage through the Welland and St. Lawrence Canals of certain Cereals, Wheat, Indian Corn, Peas, Barley and Rye, when shipped for Montreal, or for any other port East of Montreal, be continued during the forthcoming season of navigation and no longer, such toll covering the Welland and St. Lawrence Canals.

His Excellency has been further pleased to order the continuance, for the same period only, of the arrangement under which the said food products, if they have paid the ordinary full tolls for passage through the Welland Canal, shall be entitled to exemption from payment of any further toll for passage through any portion of the St. Lawrence Canal system, even if not traversing the whole distance to Montreal.

O. C., 18th March, 1889.—Whereas it is considered expedient that the special rate of toll for the passage through the Welland Canal and the St. Lawrence Canals of certain easterly bound food products, in force during the last season of navigation, should be continued during the forthcoming season.

His Excellency the Governor General in Council, in pursuance of the provisions of the 13th Section of Chapter 37 of the Revised Statutes of Canada, intituled: "An Act respecting the Department of Railways and Canals," has been pleased to order, and it is hereby ordered, that the special rate of tolls of two (2) cents per ton, in force last year for the passage through the Welland Canal and the St. Lawrence Canals of certain Cereals, Wheat, Indian Corn, Peas, Barley and Rye, when shipped for Montreal, or for any other port East of Montreal, be continued during the forthcoming season of navigation and no longer, such toll covering the Welland and St. Lawrence Canals.

His Excellency has been further pleased to order the continuance, for the same period only, of the arrangement under which the said food products, if they have paid the ordinary full tolls for passage through the Welland Canal shall be entitled to exemption from payment of any further tolls for passage through any portion of the St. Lawrence Canal system, even if not traversing the whole distance to Montreal.

EXCURSIONS: LACHINE AND ST. ANNE'S.

O. C., 1st June, 1888.—On the recommendation of the Minister of Railways and Canals, and under the provisions of the 13th Section of Chapter 37, of the Revised Statutes of Canada, intituled: "An Act respecting the Department of Railways and Canals."

His Excellency in Council has been pleased to order, and it is hereby ordered, that the provisions of the Order in Council of the 26th May, 1885, whereby steamers specially chartered for the conveyance of excursion parties going and returning in the same boat the same day were charged one-half of the usual passenger tolls for passage through the Lachine and St. Anne's Lock throughout that season, be and the same is hereby continued in force for the present season of 1888.

No. 27—*Continued.*NOTICE—*Continued.*

RAFTS, CARILLON CANAL,

O. C., 6th July, 1888.—On a memorandum dated 30th June, 1888, from the Minister of Railways and Canals, representing that under an Order in Council, Rafts have been allowed free passage through the Carillon Canal, in view of the Dam constructed across the Ottawa River at Carillon, whereby the passage of the rapids at that point through the river was rendered difficult and at times impracticable.

The Minister states, that it appears to be necessary owing to the continued difficulty attending passage through the slide built in the Dam, that the Canal should be used by Rafts; and he recommends that dating from the opening of the present season and henceforward and until otherwise ordered free passage be given to Rafts through the Carillon Canal, subject to such regulations as the Department of Railways and Canals may find it necessary in the interest of the traffic of the Canal to adopt.

49 VIC., CHAP. 32.

AN ACT RESPECTING THE BURLINGTON BAY CANAL.

[Assented to 2nd June, 1886.]

WHEREAS it is expedient in the interests of navigation, and for the convenience of the public, that Tolls for the use of the public work hereinafter mentioned should no longer be collected: Therefore Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

1. Notwithstanding anything contained in the Act thirty-first Victoria, chapter twelve, intituled: "*An Act respecting the Public Works of Canada*," no tolls shall hereafter be payable or collected in respect of the use of the public work near the City of Hamilton, in the Province of Ontario, commonly called the Burlington Bay Canal.

"STEEL" CLASSED WITH "IRON" AT 15C. ON ST. LAWRENCE CANALS ONLY.

O. C., 1st February, 1888.—WHEREAS the Minister of Railways and Canals reports that under the provisions of the existing tariff of tolls on the Dominion Canals established by an Order in Council of the 23rd June, 1883, an undesirable discrimination is in force between iron and steel for passage through the St. Lawrence Canals, iron being specified in class 3 and charged 15 cts. per ton, while steel, not being classified specially, comes under "class 4," namely, "all other articles not enumerated," and is charged 20 cts. per ton.

His Excellency in Council, on the recommendation of the Minister of Railways and Canals, and under the provisions of the 13th section of chapter 37 of the Revised Statutes of Canada, intituled: "*An Act respecting the Department of Railways and Canals*," has been pleased to order and it is hereby ordered, that the said Order in Council of the 23rd June, 1883, establishing the tariff of the tolls on the Canals of the Dominion, be and the same is hereby modified so as to place "steel" in the same category as "iron," making the charge thereon 15 cts. per ton.

COMMUTATION TOLLS, LACHINE CANAL.

O. C., 9th June, 1888.—THAT authority be given, for the present season of navigation and no longer, in the case of the vessels "Kate," "Betsy" and "Sillery," for the commutation of the sum of \$90, payable in advance for vessels and cargo for the whole of the present tolls and charges of these vessels when transshipping lumber in the Lachine Canal basin and harbor, it being understood distinctly that when such vessels are employed temporarily in transporting other commodities than deals, the ordinary tolls will be levied.

ST. PETER'S CANAL.

On each and every vessel passing through the said Canal, two cents per ton on the vessel, and one cent per ton on the freight, each way.

O.C., 21st June, 1888.—THAT following the course adopted last year and the year previous, under an Order in Council of the 11th May, 1886, commutation of tolls on the St. Peter's Canal be authorized for the current season, in the case of the Bras d'Or Steamship Company's vessels carrying Her Majesty's mails, as follows:—

On the Marion.....	\$450 00
do Neptune.....	300 00

No. 27—*Continued.*NOTICE—*Continued.*

The following Way Rates to be levied on Vessels and Property passing the several Sub-Divisions of the Canals.

WELLAND CANAL.		Rate.
1. From Port Maitland, Dunnville and Port Colborne to Port Robinson or Allanburg, not passing the Lock, each way.....		1 00/100
2. From Chippewa Cut, or any part thereof, to Dunnville, Point Maitland or Port Colborne....		1 00/100
3. From Dunnville to Port Colborne.....		1 00/100
4. From Thorold to St. Catharines or Port Dalhousie.....		1 00/100
5. From Maitland, Dunnville, Colborne or Port Robinson to Marshville and intermediate places		
6. From Marshville or intermediate places to Port Maitland, Dunnville, Port Colborne and Port Robinson.....		1 00/100
7. From Port Robinson to Allanburg or Thorold.....		1 00/100
8. do St. Catharines or Port Dalhousie.....		1 00/100
9. From St. Catharines to Port Dalhousie.....		1 00/100
10. From Dunnville to Maitland.....		1 00/100
11. From Port Robinson through the Lock and Chippewa Cut.....		1 00/100
12. From Port Colborne to Port Maitland.....		1 00/100
13. From Chippewa Cut through Lock to Port Robinson.....		1 00/100
14. From Colborne, Dunnville, Maitland and Marshville to Thorold.....		1 00/100
15. do do do St. Catharines.....		1 00/100
16. Through the Chippewa Cut only.....		1 00/100
17. Through the Port Robinson Lock only.....		1 00/100
ST. LAWRENCE CANALS.		
The Navigation to be divided into four sections, viz. : Cardinal, Cornwall, Beauharnois and Lachine. Tolls to be levied on all vessels and property in proportion to the number of sections passed through.		
CHAMBLY CANAL.		
Vessels and property passing from Sorel to Chambly, to pay.....		1 00/100
do do Chambly to St. John's, to pay.....		1 00/100
OTTAWA CANALS.		
The navigation to be divided into three section, viz. : Grenville, Carillon and St. Ann's. Tolls to be levied on all vessels and property in proportion to the number of sections passed through.		
RIDEAU CANAL.		
The Navigation of this Canal to be divided into three sections, viz. : Ottawa, Smith's Falls and Kingston Mills. Vessels and freight passing one section to be charged one-third ; two sections, two-thirds.		
GENERAL.		
Any fraction of a ton freight to be charged one ton, and portions of sections to be charged as a whole section on all the above Canals.		
The passing of Saw-Logs or other Lumber through any of the Canals, or sections thereof, is to be at all times governed by the Regulations for their management.		
HARBOR DUES.		
Vessels receiving or discharging Freight at the premises of the Welland Railway, or Ports Colborne or Dalhousie, are to be free from Harbor Dues ; but all other Vessels discharging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of Freight so received or discharged—Two cents.		

No. 27—Continued.

NOTICE—Continued.

STANDARD FOR ESTIMATING WEIGHTS.

Tons.

2,000 lbs. avoirdupois.....	1
Per M. is per thousand feet.....	
Per Mille is per thousand pieces.....	
Green Fruit, 9 barrels are.....	1
Ashes, 3 do.....	1
Bark, 4 cords.....	1
Beef, 7 barrels.....	1
Biscuit and Crackers, 9 barrels.....	1
Bricks, common, 1,000.....	2
Butter, 22 kegs or 7 barrels.....	1
Cattle, 3.....	1
Cement and Water Lime, 7 barrels.....	1
Fire Bricks, 1,000.....	3
Fish, 7 barrels.....	1
Flour, 9 barrels.....	1
Gypsum and Manganese, 6 barrels.....	1
Horses, 2.....	1
Lard and Tallow, 7 barrels or 22 kegs.....	1
Liquors and Spirits, 215 gallons.....	1
Liquors, all other, 215 gallons.....	1
Nuts, 9 barrels.....	1
Oysters, 6 barrels.....	1
Pork, 7 barrels.....	1
Salt, 7 barrels.....	1
Seeds, 9 barrels.....	1
Sheep, 20.....	1
Stone, 12 cubic feet.....	1
Stone, 1 cord.....	7 $\frac{1}{2}$
Whiskey, 4 barrels or 215 gallons.....	1
Empty barrels, 10.....	1
Barrel Hoops, 10 Mille.....	1
Board and other Sawn Lumber, 600 feet board measure.....	1
Boat Knees, 4.....	1
Firewood, 1 cord.....	3
Hop Poles, 60, or 40 cubic feet.....	1
Shingles, 12 M. or bundles.....	1
Split Posts and Fence Rails, 1 Mille.....	1
Staves and Headings, Pipe, 1 Mille.....	8
do West India, 1 Mille.....	4
do Barrel, 1 Mille.....	24 $\frac{1}{2}$
do Salt Barrel, 1 Mille.....	8
Saw Logs, Standard, 1.....	1
Square Timber, 50 cubic feet.....	1
Telegraph Poles, 10, or 40 cubic feet.....	1
Masts and Spars, 40 cubic feet.....	1
Railroad Ties, 16, or 50 cubic feet.....	1
All other Woodenware, or partially manufactured Wood, 40 cubic feet, as per Tariff.....	1
Floats, 50 lineal feet.....	1
Traverses, 40 cubic feet or 5 pieces.....	1

NOTE.—By the Weights and Measures Act of 1873, the following articles are to be estimated by the cental of 100 lbs., viz.:—Barley, Beans, Charcoal, Corn, Oats, Peas, Potatoes, Rye, Salt, Seeds and Wheat, the weight equivalent to a bushel being as follows:—Wheat, sixty pounds; Indian Corn, fifty-six pounds; Rye, fifty-six pounds; Peas, sixty pounds; Barley, forty-eight pounds; Oats, thirty-four pounds; Buckwheat, forty-eight pounds; Beans, sixty pounds; Potatoes, sixty pounds.

RATES OF TOLL ON PROPERTY STORED AT THE SHEDS AT LACHINE CANAL BASIN.

A PROCLAMATION.

WHEREAS it is expedient to provide for the levying of Tolls on the several Public Works constructed at the expense of the Province hereinafter mentioned; Know Ye, therefore, that from and after the date of these presents, and until such further time as Her Majesty's pleasure shall be made known in

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No. 27—*Continued.*NOTICE—*Continued.*

this behalf, there shall be paid for the use of Her Majesty, Her Heirs and Successors, to such person or persons as shall be duly authorized to receive the same, for passage and in the name of Tolls, the several sums agreeably to the scales which accompany these presents. Of all of which Her Majesty's loving subjects, and all others whom these presents may concern, are hereby required to take notice and to govern themselves accordingly.

Given under my hand and seal, at Montreal, the twenty-first day of August, in the year of Our Lord, one thousand eight hundred and forty-six, and the tenth year of Her Majesty's Reign.

By command,
(Signed) D. DALY,
Secretary.

(Signed) CATHCART.

TABLE OF THE TOLLS TO BE LEVIED UPON PROPERTY STORED AT THE SHEDS AT THE LACHINE CANAL BASIN.

			s.	d.
Wheat and other grain, per week, per bushel.....				$\frac{1}{2}$
Flour and meal do per barrel.....			2	
Pork, beef, butter and lard do do.....			3	
Muscovado sugar do per hhd., 6d. per barrel.....			3	
Liquors { do per pipe, 9d. per puncheon.....			7	$\frac{1}{2}$
{ do per hhd., 6d. per quarter cask.....			4	
Iron, bars do per ton.....			1	0
Iron, pig do do.....			6	
Salt do per 100 minots.....			1	8
Bales, crates, cases, &c. do per ton weight or measurement.....			1	0
Coals do per chaldron.....			6	

1. No charge made for property stored in the Sheds at Lachine Canal Basin, for the first forty-eight hours, after which period the foregoing rates of storage for the use of the sheds, are to be raised, levied and collected.
2. Articles unenumerated are to be charged according to the above rates.
3. All property stored in the sheds remaining after the first forty-eight hours, will be liable to one week's storage, although it only should have been stored for a portion of the same, and so on for each succeeding week.
4. The labor of receiving property into the sheds and delivering the same, to be at the expense of, and to be furnished by the owners of the property or their agents.
5. All property stored in the sheds to be at the risk of the proprietor, from damage by fire or otherwise.
6. All dues for storage to be paid before the removal of the property.

Notice is hereby given that His Excellency the Governor General in Council has been pleased to authorize the Tolls levied upon property stored at the sheds at the Lachine Canal Basin, under Proclamation dated 21st August last, to be continued until further notice.

By command,

(Signed)

J. W. DUNSCOMB,

Commissioner of Customs.

INSPECTOR GENERAL'S OFFICE,

CUSTOM'S DEPARTMENT, 28th October, 1846.

INSPECTOR GENERAL'S OFFICE,

CUSTOM'S DEPARTMENT,

TORONTO, 31st May, 1858.

Notice is hereby given that His Excellency the Governor General has been pleased by an Order in Council bearing this day's date, to order and direct that the storage of flour in the sheds at the Lachine Canal Basins at Montreal be, until otherwise ordered, governed by the following regulations, viz. :—

1. Flour shall be allowed to remain in the sheds for two whole days free of charge;
2. If kept there beyond two days or 48 hours, such flour to be liable to a charge of one cent per day per barrel, for the first four days after the expiration of the 48 hours of exemption;
3. Should the flour be kept in the sheds beyond four days at one cent per day per barrel, it shall be liable to pay two cents per day per barrel for every day subsequent to the expiration of such four days;
4. Any part of a day to be considered as one day.

By command,

(Signed)

R. S. M. BOUCHETTE,

Commissioner of Customs.

No. 27—*Continued.*NOTICE—*Continued.*

PRIVY COUNCIL OFFICE,
OTTAWA, 12th June, 1880.

On the recommendation of the Honorable the Minister of Railways and Canals, the Committee advise that the rates chargeable for the storage of salt at the St. Gabriel's Sheds, Montreal, under the authority of an Order in Council, dated 1st July, 1846, whereby such rates were fixed at one cent per bag per week, after the expiry of the first 48 hours, be now amended, and the rate be reduced to one-half a cent per bag per week after the first 48 hours.

The Committee submit the above recommendation for your Excellency's approval.

(Signed) J. O. COTÉ,
Clerk, Privy Council.

TOLLS ON VESSELS TRADING TO LOWER PORTS AND ENTERING THE LACHINE
CANAL AT MONTREAL HARBOR.

GOVERNMENT HOUSE,
QUEBEC, 8th June, 1860.

His Excellency the Governor in Council is pleased to order, and it is hereby ordered, that from and after the date hereof, the following Rates of Tolls shall be levied upon Vessels trading to Lower Ports, and entering the Lachine Canal from the Harbor of Montreal, and on certain goods herein mentioned; said Vessels to be allowed 48 hours for discharge of cargo before the following be incurred; and said discharge to be made below the St. Gabriel Lock.

Class of Vessel.	Rate of Toll.
Steamboats measuring 50 tons and upwards, per Ton Register, per day of 24 hours	8 mills.
All other vessels measuring 50 tons and upwards, per Ton Register, per day of 24 hours	4 do
Steamboat measuring under 50 Tons Register, each day of 24 hours	40 cents.
All other vessels measuring from 25 to 50 Tons Register, per day of 24 hours	20 do
All vessels measuring less than 25 Tons Register, per day of 24 hours	10 do
Coal, per chaldron	10 do
Salt, per 100 Minots	15 do
Iron of all kinds, per ton weight	15 do
Merchandise as in Class No. 6 of the Tariff of Tolls on Provincial Canals	10 do

Provided always that the above Tolls be levied only on goods for consumption in Montreal, and on vessels trading with that Port.

(Signed) W. H. LEE,
Clerk, Privy Council.

CHARGES FOR WHARFAGE OF FIREWOOD ON WHARVES AND BANKS OF
LACHINE CANAL.

O.C., 7th August, 1860—1. On the recommendation of the Honorable Commissioner of Public Works, His Excellency the Governor General in Council is pleased to order, and it is hereby ordered, that the Rates of Toll authorized by an order of His Excellency in Council of the 8th June last, to be collected on firewood on wharves at Lachine and Lachine Canal, and lying between Wellington Bridge and Lock No. 5, and on wharves in Lachine Canal Basin, be, and they are hereby altered and changed, and His Excellency is pleased to order that in lieu thereof, the following Rates of Tolls shall be collected as herein mentioned, that is to say:

2. Firewood landed on wharves or banks of the Canal, or in boats, barges or other craft, occupying any of the basins between Wellington Street Bridge and Lock No. 3, 4 cents per cord, and for every day the wood is allowed to remain in either the Canal or Basin, or on the wharves or banks after the first five days, an additional charge of 4 cents per cord will be made.

Firewood on bank of Canal between Lock No. 3 and Lock No. 5, and on wharves in Canal Basin at Lachine:

	Per Cord.
For receiving timber, &c., to include use of basin or wharf for one month	3 cents.
For each succeeding month during season of navigation	3 do
For wintering in basin or on wharf	3 do

GOVERNMENT HOUSE,
QUEBEC, 27th January, 1862.

Present:

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

On the recommendation of the Honorable the Commissioner of Public Works, His Excellency in Council has been pleased to order, and it is hereby ordered, that the provisions of the Order in Council of the 8th day of June, 1860, as amended by the Order in Council of the 7th of August following, respecting the Rates of Toll to be collected on firewood on wharves at Lachine, and the Lachine Canal and Basin, be and they are hereby extended and made applicable to the banks and grounds at Côte St. Paul and at Lachine.

(Signed) W. H. LEE,
Clerk, Privy Council.

No. 27—*Continued.*NOTICE—*Continued.*

GOVERNMENT HOUSE,
OTTAWA, 4th February, 1880.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

Whereas by Order in Council, dated the 8th June, 1860, authority was given for the collection of the following Rates of Toll on "firewood on bank of Canal between Lock No. 3 and Lock No. 5, and also on wharves in Canal Basin at Lachine":

	Per Cord.
For receiving timber, &c., to include use of basin or wharf for one month.....	3 cents.
For each succeeding month during the season of navigation.....	3 do
For wintering in basin or on wharf.....	3 do

And whereas it has been shown that at present great difficulty exists in the collection of monthly dues on firewood, and the abolition of these charges will facilitate business and add to the revenue; His Excellency the Governor in Council, on the recommendation of the Honorable the Minister of Railways and Canals, has been pleased to order, and it is hereby ordered, that the clause of the Order in Council of the 8th June, 1860, under which said charges have been payable be and it is hereby cancelled, such cancellation to take effect on and after the 1st day of July

(Signed) J. O. COTÉ,
Clerk, Privy Council.

THE CANAL BASINS WITHIN THE CITY LIMITS OF MONTREAL TO BE CONSIDERED
AS PART OF THE MONTREAL HARBOR FOR CERTAIN PURPOSES.

GOVERNMENT HOUSE,
OTTAWA, 8th August, 1878.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

1. Whereas the Honorable the Minister of Public Works has represented: That under existing regulations for the collection of Canal Tolls, eastern bound vessels having paid the charges one way in full through the Welland Canal, are chargeable one section Canal Toll if re-entering the Lachine Canal;
2. That vessels loaded with grain destined for the Montreal harbor frequently unload only part of their cargoes on board sea-going vessels in that harbor, and re-enter the Lachine Canal for the purpose of unloading the balance of their cargoes either in elevators or mills located along the canal basins;
3. That in his opinion those vessels having paid the charges one way in full through the Welland Canal, should be allowed to re-enter the Lachine Canal free of Tolls, for the purpose before mentioned.
4. Whereupon His Excellency in Council, on the recommendation of the Honorable the Minister of Public Works, has been pleased to order, and it is hereby ordered, that the canal basins within the city limits be considered as part of the Montreal harbor, in so far only as regards the collection of Tolls on the class of vessels above referred to, which re-enter that portion of the canal for the purpose of unloading the balance of their cargoes, but that the same shall not apply any further, as in the event of vessels returning to the harbor to take cargo, in which case the usual Toll shall be charged against them on passing out of the canal a second time into the harbor.

(Signed) W. A. HIMSWORTH,
Clerk, Privy Council.

GOVERNMENT HOUSE,
OTTAWA, 12th July, 1881.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

5. Whereas representations have been made by parties interested, showing that vessels laden with grain for delivery in Montreal Harbor, frequently carry also deck loads of phosphates, and that being compelled to proceed at once to the Harbor for the discharge of the grain, they pay tolls through to that point, subsequently re-entering the Lachine Canal for the storage of the phosphates, and in accordance with the existing regulations paying canal dues a second time for such re-entry.
6. And whereas a similar difficulty having been experienced with regard to the storage of surplus grain not required for shipment, an Order in Council was passed on the 8th of August, 1878, allowing re-entry free of Tolls for the purpose indicated; His Excellency in Council, on the recommendation of the Hon. the Acting Minister of Railways and Canals, has been pleased to order, and it is hereby ordered, that the Lachine Canal Basins within the Montreal City limits, be henceforward considered as part of the Montreal Harbor, for the purposes of the unloading of phosphates carried by vessels in addition to their grain cargoes, as above described; it being, however, provided that in the event of their returning to the harbor to take cargo, the usual Tolls shall be charged against such vessels on their passing out of the Canal a second time.

(Signed) J. O. COTÉ,
Clerk, Privy Council.

No. 27—*Continued.*NOTICE—*Continued.*

RATES OF CHARGES ON VESSELS WINTERING IN LACHINE CANAL.

GOVERNMENT HOUSE,

OTTAWA, 22nd August, 1879.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

1. Whereas the Honorable the Acting Minister of Railways and Canals has represented that by the Act 36 Vic., Chap. 128, a system of Measurement and Registration of Shipping was for the sake of uniformity adopted, which, by including portions of a Vessel exempted from Measurement by the "Merchants' Shipping Act," previously in force, has very largely added to the nominal tonnage of Vessels, and that it has, accordingly, become necessary that the rates per ton formerly charged for wintering Vessels in the Lachine Canal, should be altered to meet the new conditions of measurement.
2. His Excellency, on the recommendation of the Acting Minister of Railways and Canals, and by and with the advice of the Queen's Privy Council of Canada, has been pleased to order, and it is hereby ordered: that the following wintering charges be, and the same are hereby substituted in place of the rates at present charged, viz.:—
3. For each Boat, Barge, Scow or other Vessel of ten (10) tons measurement and under, seventy (70) cents per vessel for the entire winter; and every ten (10) tons above the first ten, an additional rate of eight (8) cents.

(Signed),

W. A. HIMSWORTH,

Clerk, Privy Council.

CHARGES FOR WINTERING VESSELS IN RIDEAU CANAL.

CERTIFIED COPY of a report of a Committee of the Honorable the Privy Council, approved by His Excellency the Governor General in Council, on the 19th March, 1887.

On a memorandum dated 18th March, 1887, from the Minister of Railways and Canals, recommending that the winterage dues for vessels wintering in the Canal Basin at Ottawa, or other points along the line of the Rideau Canal, be fixed as under:—

In Canal Basin, Ottawa,	Steamers,	per season.....	\$ 8 00
do do	Barges	do	4 00
Inside Locks do	Steamers	do	50 00
do other stations	do	do	15 00

and further, that if he deems it advisable that authority be granted to take security from parties wintering their vessels in Locks, against damage to Government property by fire.

(Signed),

JOHN J. MCGEE,

*Clerk, Privy Council*RATES AND DUES LEVIED ON VESSELS LOADING AND UNLOADING IN THE
NEW BASIN, LACHINE CANAL.

- O. C., 26th January, 1883.—1. On a report dated 19th January, 1883, from the Minister of Railways and Canals, submitting an application dated 17th August, 1882, from the Montreal Harbor Commissioners, for the extension to the new Lower Basin of the Lachine Canal of certain powers of levying tolls conferred upon the Corporation by the Act 18 Vic., Chap. 143, in respect of the Lower Basin on the old Canal.
2. The Minister further submits that the Commissioners urge that the new Basin is used by sea-going vessels which have traversed the improved deep-water channel between Quebec and Montreal, upon which large sums of money have been expended by the Trust, and that by this action the Harbor revenues are likely to be seriously affected.
3. The Minister represents that the matter having been referred for report to the Chief Engineer of Canals, who states to the effect, under date 12th January inst., that at the time of the passage of the Act cited (1855) the municipality was responsible for the expenditure incurred in deepening the channel of the river, and that the Government, about ten years later, assumed the debt in respect of Lake St. Peter, amounting to \$1,164,235; further, that the Harbor Commissioners have not in any way aided in the construction of the new Canal entrance and Basins, and that he is unable to see grounds for giving them control over the revenue which may arise therefrom.
4. The Chief Engineer suggests that the Commissioners should be allowed to retain the right of levying dues in respect of the old Lower Basin, but that the Government should retain full control of the new works and Basins, and of the revenue that may be derived from their use, and he advises that the rates should be levied by the Government on vessels loading or unloading in the new Basins, equal and similar to those levied by the Commissioners in respect of the old Basin.
5. The Minister concurs in the view taken by the Chief Engineer, and recommends that authority be given in accordance therewith.
6. The Committee submit the above recommendation for Your Excellency's approval.

(Signed),

JOHN J. MCGEE,

Clerk, Privy Council.

No. 27—*Continued.*NOTICE—*Continued.*

RATES AND DUES TO BE LEVIED IN THE HARBOR OF MONTREAL, UNDER AND BY VIRTUE OF THE ACTS 40 VIC., CHAP. 53, AND 42 VIC., CHAP. 28.

On and after the 1st day of April, 1881 :—

TONNAGE DUES

To be levied on all Vessels in the Harbor.

On Steamboats for each day of twenty-four hours, or part of a day they remain in the harbor, reckoned from the hour of their arrival to that of their departure..	1c. per ton register.
On all other Vessels, per day, as aforesaid.....	$\frac{1}{2}$ c. do

WHARFAGE DUES

To be levied on all Merchandise, Animals and things whatsoever landed or shipped in the Harbor.

All Goods, Wares and Merchandise, not elsewhere specified.....	25c. per ton.
Hay, Straw, Pig and Scrap Iron, Pot and Pearl Ashes.....	20c. do
Apples, Crates and their contents, Flour and Meal, Fish, Meats, Pitch, Potatoes, Tar, Horses, Neat Cattle, Sheep, Swine.....	15c. do
Ballast, Clay, Fire Bricks, Gypsum, Lime, Marble, Phosphates, Sand, Salt.....	10c. do
Coal and Coke, Grain and Seeds of all kinds.....	7 $\frac{1}{2}$ c. do
Special—Bricks, 10c. per 1,000; Cordwood, 5c. per cord; Lumber, 10c. per 1,000 feet, board measure.	

Bullion, Specie..... Free.

On all Goods, Wares and Merchandise whatsoever, the quantity of which by weight, measurement or other mode of estimate provided for in the Tariff, cannot be conveniently ascertained, it shall be lawful for the Harbor Commissioners to levy a rate of $\frac{1}{4}$ of 1 per cent. on the value thereof.

Each entry shall pay not less than 5 cents.

All property landed on the wharves for re-shipment shall only pay one wharfage.

The Ton mentioned in the Tariff of Wharfage Dues shall be 2,000 lbs. weight, or 40 cubic feet measurement, according to the Bill of Lading.

STANDARD FOR ESTIMATING WEIGHTS.

Ashes, Pot and Pearl.....	3 brls. to 1 ton.	Neat Cattle.....	3 to 1 ton.
Apples, Flour, Meal, Potatoes....	9 do	Sheep.....	15 do
Fish, Meats, Pitch, Tar.....	7 do	Swine.....	10 do
Horses.....	2 to 1 ton.		

Certified,

HARBOR COMMISSIONERS' OFFICE.

(Signed),

H. D. WHITNEY,

Secretary.

PRIVY COUNCIL OFFICE,

OTTAWA, 1st April, 1881.

I hereby certify that the foregoing Tariff has been approved by His Excellency the Governor General in Council, on the 1st day of April, 1881.

(Signed), J. O. COTÉ

Clerk, Privy Council.

At a meeting of the Harbor Commissioners of Montreal, held on the second of June, 1881, the following By-law was adopted under the authority of the Act 42 Vic., chap. 28. Present :—Andrew Robertson, Esq., Chairman; J. B. Rolland, Edward Murphy, Henry Bulmer, Victor Hudon, Hugh McLennan, Chas. M. Gould. Hon. J. L. Beaudry (Mayor) and Andrew Allan, Esq.

"Whereas it is expedient in the general interest of the Port of Montreal, that the charges on grain be reduced until the first of September next.

"Therefore it is hereby resolved, that the said rate on grain be reduced as aforesaid from seven and one half cents (7 $\frac{1}{2}$ c.) per ton to one cent (1c.) per ton."

PRIVY COUNCIL, 7th June, 1884.

I hereby certify that the foregoing By-law of the Harbor Commissioners of Montreal, adopted under the authority of the Act 42 Vic., chap. 28, has been this day approved by His Excellency the Governor General in Council.

(Signed)

JOHN J. MCGEE,

Clerk, Privy Council.

No. 27—Continued.

NOTICE—Continued.

RATES OF TOLLS ON FLOATED TIMBER, &c., ENTERING THE BASIN AT LACHINE AND LACHINE CANAL.

O. C., 8th June, 1860.—1. His Excellency the Governor General in Council is pleased to order, and it is hereby ordered, that from and after the date hereof the following Rates of Tolls shall be collected on Floated Timber, Lumber and Firewood entering the Basin at Lachine and Lachine Canal :—

Kinds of Timber.	For receiving Timber &c., to include use of Basin or Wharf for one month.	For each succeeding month during the Season of Naviga- tion.	For wintering in Ba- sin or on Wharf.
	Cents.	Cents.	Cents.
Timber, square or round, of all kinds, above 12 x 12, per M. cubic feet.....	25	20	35
do round or flatted, of all kinds, under 12 x 12, per M. lineal feet.....	20	15	30
Plank and Boards, to include all kinds of sawed lumber, in rafts, per M. feet, board measure.....	3	2	3
Sawlogs, 12 feet long, if longer in same proportion per log.....	1	$\frac{1}{2}$	2
Floats, per 100.....	10	5	10
Traverses, per 100.....	10	5	10
Fence Posts and Rails, per M.....	10	5	10
Staves, Barrel, per M.....	8	4	8
do Pipe, per M.....	8	4	8
do West India, per M.....	8	4	8
Firewood on Bank of Canal, between Lock No. 3 and Lock No. 5, and also on Wharves in Canal Basin at Lachine.....	3	3	3

- 2. No allowance to be made for fractional parts of a month or winter season.
- 3. The Firewood to be corded across the bank while being delivered from the Boat in such a manner and at such points as the Superintendent may direct.
- 4. The Rates on Timber to take effect upon the completion of the Booms in Lachine Basin.

No. 27—*Continued.*NOTICE—*Continued.*CHARGES FOR REPAIRING VESSELS ON THE BANK OF LACHINE, BEAUHARNOIS
AND CHAMBLY CANALS.PRIVY COUNCIL OFFICE,
OTTAWA, 5th March, 1880.

1. I hereby certify that by order of His Excellency the Governor General in Council, passed on the seventh day of February last, authority was given for the enforcement of a rule by which persons using the banks of the Lachine Canal as a site for the repair of their vessels, shall be subject to a charge of four dollars (4) payable in advance, for each vessel; the period during which such site may be occupied, under any one payment being limited to six months, and permission for repairing being first obtained from the proper officer, in conformity with the existing canal regulation.
2. It is further declared by the said Order in Council that in the event of failure to remove vessels so occupying the banks at the expiration of the period named, no fresh permits having been obtained, such vessels, may be sold under the 16th clause of the regulations of the Canal.

(Signed), J. O. COTÉ

*Clerk Privy Council.*GOVERNMENT HOUSE,
OTTAWA, 6th August, 1881*Present :*

THE HONORABLE THE DEPUTY OF HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

The Deputy Governor, on the recommendation of the Honorable the Acting Minister of Railways and Canals, has been pleased to adopt the following rules with respect to the repairing of vessels on the banks of the Lachine Canal, the Beauharnois and the Chamby :—

1. Repairs shall only be executed at such points as may be indicated and approved by the Superintendent.
 2. For each vessel hauled up or beached for repairs, a charge of one dollar, over and above all other charges, shall be made, carrying the privilege of remaining for one month, a further sum of one dollar being charged for each additional month or fraction of a month the vessel may remain.
- In cases, however, where a vessel hauled up for repairs upon the Canal bank remains there throughout the winter, a charge of four dollars only shall be made (in addition to the ordinary winterage dues) the period covered being from the 1st of November to the 1st of June, inclusive.
3. Any vessel remaining on the Canal bank after having wintered thereon shall be charged at the rate of one dollar a month, or a fraction of a month of her subsequent stay.
 4. Any vessel remaining more than one year on the bank of the Canal shall for such time as she may remain in excess of that period, pay at the rate of two dollars a month, or fraction of a month throughout the whole year.
 5. All charges shall be payable at the collector's office in advance on the first day of each month.
 6. These rules shall be understood as applying to all cases where the Canal bank is used in any manner for the repairs of vessels, whether such vessels are actually hauled up or not.

(Signed),

J. O. COTÉ,

*Clerk, Privy Council*RIDEAU CANAL—REGULATIONS RELATIVE TO FIREWOOD LANDED AT
BASIN, OTTAWA.

Notice is hereby given that in accordance with the 28th Chap., Con. Stat. of Canada, His Excellency the Governor General in Council has been pleased to approve of the following additional Regulations to ensure the proper using, management and protection of the Canals of the Dominion of Canada.

By command,
(Signed),

WM. H. LEE,

*Clerk, Privy Council*PRIVY COUNCIL OFFICE,
OTTAWA, 14th October, 1867.

REGULATIONS in pursuance of the 28th Chap., Con. Stat. of Canada, for landing Firewood on the line of the Rideau Canal, in the City of Ottawa, and in addition to the Regulations for the management and protection of the Provincial Canals which were authorized by the Governor in Council, 20th May, 1857, Sections 14 and following, and were made applicable to the Rideau Canal, under the order of His Excellency in Council, on the 2nd June, 1860.

1. No Firewood to be landed on the easterly side of the Basin from Sappers' Bridge to the line of Little Sussex Street.

No. 27—*Concluded.*NOTICE—*Concluded.*

2. Firewood may be landed between the line of Little Sussex Street and the By-wash or waste weir, but must be removed within twenty-four hours after having been placed there; a fine of three cents per cord will be charged for every day the wood remains on the wharf after such notice has been given.
3. Firewood may be landed and piled around the Basin on Government land within forty feet of the water, leaving a roadway of at least fifteen feet between every four piles of Firewood, which roadway must be as near as practicable at right angles to the margin of the Canal; this wood must also be removed within twenty-four hours after the owner or person in charge has been notified to that effect, and in default, a fine of three cents per cord will be levied upon it for every day it remains thereafter.
4. Two cents per cord will be charged as wharfage or ground rent upon Firewood placed on any part of the Government Canal Reserve.
5. No Firewood may be landed without a permit having been first obtained from the Lock Master or Collector, and the Let-Pass must be given up to this officer before the wood is unloaded, under a penalty of forty dollars.

B. H. TEAKLES,

Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,

OTTAWA, 30th November, 1889.

APPENDIX

DR.

No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1888.	Accrued, year ended 30th June, 1889.	Total.	Number.	Name of Work.	Present Occupant.	Original Lessee.
£ cts.	£ cts.	£ cts.				
93 65	187 30	280 95	1	Welland Canal....	Wood & Green.....	R. Laurie.....
600 00	240 00	840 00	2	do	S. Neelon.....	R. & J. Laurie.....
50 00	20 00	70 00	3	do	do	do
	176 00	176 00	4	do		A Muir
1,050 00		1,050 00	5	do	Andrews & Son.....	Donaldson, Andrews & Ross.
1,270 50		1,270 50	6	do		Donaldson, Andrews & Ross.
300 00	100 00	400 00	7	do		Wm. Hutchinson.....
260 00	390 00	650 00	8	do	Tuttie, Date & Rodden.	J. L. Ranney.....
75 00	150 00	225 00	9	do	S. Neelon.....	C. Phelps.....
20 00	40 00	60 00	10	do	Norris & Neelon.....	do
251 49	167 66	419 15	11	do	Whitman & Barns Manufacturing Co.....	R. Collier.....
420 00	140 00	560 00	12	do	J. B. Smith.....	Thos. Towers.....
250 00	500 00	750 00	13	do		St. Catharines Water Power Co.....
	20 00	20 00	14	do		St. Catharines and Welland Gas Light Co....
600 00	75 00	675 00	15	do		J. C. & J. Gillespie....
35 00		35 00	16	do		St. Catharines Street Railway Co.....
100 50		100 50	17	do		John F. Rees.....
75 00	75 00	150 00	18	do		Whitman & Barns Manufacturing Co.....
36 06	22 00	58 00	19	do		H. Jarvis.....
108 00	216 00	324 00	20	do	McLeary & McLean....	Wm. Beatty.....
120 00	240 00	360 00	21	do	Lybster Cotton Co.....	Gordon & McKay.....
120 00	240 00	360 00	22	do		John Riordon.....
100 00	200 00	300 00	23	do	do	do
800 00	400 00	1,200 00	24	do	Merritton Cotton Co....	King & Dolan.....
			25	do		Corporation of Village of Merritton.....
60 00	60 00	120 00	26	do		Jas. Wilson.....
	100 00	100 00	27	do		Lybster Cotton Mill....
31 80	63 60	95 40	28	do	Thorold, W. & C. Co....	Wm. Beatty.....
150 00	50 00	200 00	29	do	John McDonagh.....	W. H. Ward.....
1,288 00	146 00	1,434 00	30	do	do	do
1 00		1 00	31	do		St. Catharines and Niagara Central Ry. Co..
200 00	25 00	225 00	32	do		John Battle.....
280 00	80 00	360 00	33	do		do
110 00	222 00	333 00	34	do	Howland, Jones & Co....	P. Howland.....
65 00	130 00	195 00	35	do	Jas. Norris.....	Brown & Ross.....
80 00	80 00	160 00	36	do	Arch. Dobbie.....	Welland Canal Loan Co.
55 00	110 00	165 00	37	do	C. J. Jones.....	McPherson & Wier....
	5 00	5 00	38	do		Corporation of Thorold..
340 00		340 00	39	do		John Battle.....
60 00	120 00	180 00	40	do	J. Davey, jr.....	do
5,007 46		5,007 46	41	do		Wright & Duncan.....
20 00	20 00	40 00	42	do		P. H. Musson.....
940 00		940 00	43	do	J. & J. Abbey.....	McFarland & Lemon...

A.—Continued.

Lessees' Accounts, 1888-89.

Dr.

Description of Property.	Number.	Date to which the Account is made up.	Abatement authorized.	Paid during Fiscal Year.	Balances due, 30th June, 1889.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Grist Mill, Waste Wier No. 1, Port Dalhousie....	1	Jan. 1, 1889		93 65	187 30	280 95
Mill Lot do do	2	June 30, 1889			840 00	840 00
Lot near do do	3	do			70 00	70 00
Docks near do do	4	do		176 00		176 00
Dry Dock, part of Lock No. 1 do	5	Jan. 1, 1882			1,050 00	1,050 00
Saw Mill, Waste Pier No. 1 do	6	do			1,270 50	1,270 50
Wharf Lot, East end East Pier do	7	June 30, 1889		300 00	100 00	400 00
Union Mill, near Lock No. 2, St. Catharines	8	do			650 00	650 00
Merchants' Red Mill do	9	do			225 00	225 00
Wharf at Lock No. 4 do	10	do			60 00	60 00
Saw Mill at Lock No. 5 do	11	do		251 49	167 66	419 15
Grist Mill at new Lock No. 10 do	12	do		420 00	140 00	560 00
Water Power from Locks 3 to 11 do	13	do		500 00	250 00	750 00
Wharf Lot at Lock No. 4 do	14	Jan. 1, 1890		20 00		20 00
Lot near Lock No. 5 do	15	Oct. 1, 1889			675 00	675 00
Privileges of placing Bridge over Water-way, St. Catharines	16	Oct. 1, 1886			35 00	35 00
16½ acres of Lot 11, Con. 7, Grantham, for pasture, St. Catharines	17	Mar. 1, 1885			100 50	100 50
Old Lock House at Lock No. 6, St. Catharines...	18	Oct. 1, 1889		150 00		150 00
Part of Lot 16, Con. 4, Grantham, for Sail Loft, St. Catharines	19	July 1, 1889		58 00		58 00
Saw Mill at Lock No. 20, Merritton	20	June 30, 1889			324 00	324 00
Cotton Factory at Lots 12, 13 & 14, Merritton	21	do			360 00	360 00
Water Lots at Lots 16, 18, 19 & 21 do	22	do		240 00	120 00	360 00
Paper Factory, Lot 17 do	23	do		200 00	100 00	300 00
Water supply to Cotton Mills do	24	do		400 00	800 00	1,200 00
Lot between Lock No. 25 and Guard Gates, Merritton	25	do				
Water supply at Merritton	26	do		30 00	90 00	120 00
Part of Lots 11 & 12, Con. 10, Grantham, Merritton	27	Feb. 1, 1890			100 00	100 00
Tannery at Lock No. 22, Thorold	28	June 30, 1889		63 60	31 80	95 40
Factory do 23 do	29	do			200 00	200 00
Saw Mill do 23 do	30	do		600 00	834 00	1,434 00
Track through the Towns of Thorold and Merritton	31	Oct. 11, 1888			1 00	1 00
Wharf and right of way over Raceway at Lock 25, Thorold	32	June 30, 1889		200 00	25 00	225 00
Plaster Mills at Lock 25, Thorold	33	do		280 00	80 00	360 00
Grist Mills do 25 do	34	do			333 00	333 00
Merchants' Mill do 23 do	35	do		130 00	65 00	195 00
Machine Shop do 22 do	36	do		80 00	80 00	160 00
do do 23 do	37	do			165 00	165 00
Part of Lot 17, near Lock 24, Thorold	38	Oct. 1, 1889		5 00		5 00
Lot on west side New Canal do	39	do	340 00			340 00
Water Lot, Thorold	40	June 30, 1889		120 00	60 00	180 00
Grist Mill, Allanburg	41	Jan. 1, 1882			5,007 46	5,007 46
Storehouse do	42	April 1, 1889			40 00	40 00
Saw Mill, Port Robinson	43	July 1, 1877			940 00	940 00

APPENDIX

Dr.

No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1888.	Accrued, year ended 30th June, 1889.	Total.	Number.	Name of Work.	Present Occupant.	Original Lessee.
£ cts.	£ cts.	£ cts.				
43 00	43 00	86 00	44	Welland Canal		John Hill
630 00	140 00	770 00	45	do	S. Neelon.	Port Robinson Dry Dock Co.
285 00		285 00	46	do	J. Crowe.	Killens & Dockstader.
141 15		141 15	47	do	Hendershot Bros.	Eli Mead
151 30		151 30	48	do	do	A. Sherwood
300 00		300 00	49	do	do	Hendershot Bros.
40 00		40 00	50	do		F. O. White.
	1 00	1 00	51	do		Corporation, County of Welland.
45 00	45 00	90 00	52	do		Phelp Bros.
40 00	20 00	60 00	53	do		James Bridges
2 00	1 00	3 00	54	do		H. A. Rose
	120 00	120 00	55	do		C. J. Page & Co.
	40 00	40 00	56	do		Corporation of Town of Welland
	5 00	5 00	57	do		Caleb Swayze
150 00	25 00	175 00	58	do	L. G. Carter	A. K. Scholfield.
	20 00	20 00	59	do		Welland Railway Co.
12 50	25 00	37 50	60	do	J. & F. Conlin.	John Gordon.
	1 00	1 00	61	do		Corporation of Port Colborne.
346 54	213 32	559 86	62	do	Edward Lee	John Graybiel.
30 00	10 00	40 00	63	do		Alex. Lattimore.
700 97	143 00	843 97	64	do	A. McDonald	Wm. Melanby
150 00	240 00	390 00	65	do	R. Chambers	H. & N. Davis
317 84	166 10	483 94	66	do	S. & J. Haney	S. Darling
155 61	80 00	235 61	67	do	S. Walthe & Co.	L. J. Weatherly.
583 72	113 00	696 72	68	do	S. & J. Haney	Brown & Merritt.
	230 00	230 00	69	do	Wm. Scholfield	L. Brocklebank
639 50	204 00	843 50	70	do	M. A. Smith.	Chisholm & Miner
70 00		70 00	71	do		John Taylor
150 00		150 00	72	do		J. W. Holmes.
60 00		60 00	73	do		Geo. Wallace.
	115 00	115 00	74	do		Rolston & Haskins.
	360 00	360 00	75	do	Moody & Son	R. F. Lattimore.
20,468 53	7,170 98	27,639 51				
	246 00	246 00	1	Williamsburg Canal	Wm. Gibson.	Wm. Gibson
315 00		315 00	2	do	M. F. Beach	Wm. Elliott
250 00	140 00	390 00	3	do	Cameron & McInnis.	J. Molson, jun.
4,480 00	160 00	4,640 00	4	do	Edwardsburg Starch Factory	Benson & Aspden
1,282 62	140 00	1,422 62	5	do	P. O'Keef	P. Carmen
35 00	5 00	40 00	6	do		J. C. Irvine.
	12 00	12 00	7	do		W. T. Benson.
40 00	20 00	60 00	8	do	W. M. Doran.	Wm. Bailey
24 00	24 00	48 00	9	do		J. H. Ross
	1 00	1 00	10	do		Trustees, Section No. 4.
	5 00	5 00	11	do	E. E. Gilbert	Wm. Clegg
	5 00	5 00	12	do		John Reid.
	8 00	8 00	13	do	Est. W. T. Benson.	G. P. Anderson.
10 00	10 00	20 00	14	do		Sidney Shaver

A—Continued.

Lessees' Accounts, 1888-89—Continued.

CR.

Description of Property.	Number.	Date to which the Account is made up.	Abatement Authorized.	Paid during Fiscal Year.	Balance due, 30th June, 1889.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Grist Mill, Port Robinson.....	44	June 30, 1889		86 00		86 00
Water to float vessels, Port Robinson.....	45	do			770 00	770 00
Saw Mill, Welland.....	46	do	285 00			285 00
Wharf Lot do.....	47	Dec. 31, 1886			141 15	141 15
do do.....	48	do			151 30	151 30
do do.....	49	June 30, 1878			300 00	300 00
Lot for pasture, Welland.....	50	April 1, 1884			40 00	40 00
Water supply to Court House, Welland.....	51	Aug. 1, 1889		1 00		1 00
Surplus water, in winter only, near Acqueduct, Welland.....	52	June 30, 1889		45 00	45 00	90 00
Lot on West Main Street, Welland.....	53	Aug. 1, 1887			60 00	60 00
Lot for building purposes do.....	54	Mar. 1, 1889			3 00	3 00
Water Power for Town of do.....	55	Oct. 1, 1889		120 00		120 00
do Pump House, &c., Welland.....	56	July 1, 1890		40 00		40 00
Building Lot, Welland.....	57	June 30, 1889		5 00		5 00
Wharf Lot, Port Colborne.....	58	do		162 50	12 50	175 00
Lot for Elevator, Port Colborne.....	59	Jan. 1, 1889		20 00		20 00
Lot for Coal and Wood Yard, Port Colborne.....	60	June 30, 1889		25 00	12 50	37 50
Roadway across Canal Lands to Grand Trunk Railway Crossing, Port Colborne.....	61	Nov. 1, 1889		1 00		1 00
Grist Mill, Marshville.....	62	June 30, 1889			559 86	559 86
Part of Lots 18 & 19, Con. 4, Wainfleet, Marshville.....	63	do			40 00	40 00
Saw Mill, Broad Creek.....	64	June 30, 1889			843 97	843 97
Grist and Saw Mill, Dunnville.....	65	do			390 00	390 00
Grist Mill do.....	66	do			483 94	483 94
Carding Mill do.....	67	do			235 61	235 61
Plaster Mill do.....	68	do			696 72	696 72
Grist Mill do.....	69	do		76 67	153 33	230 00
Saw Mill do.....	70	do			843 50	843 50
Wharf Lot do.....	71	do			70 00	70 00
Mill Lot do.....	72	June 30, 1884			150 00	150 00
Lot for Tannery do.....	73	Nov. 1, 1884			60 00	60 00
Water Power for Electric Light, Dunnville.....	74	Jan. 1, 1890			115 00	115 00
Water Lot do.....	75	July 1, 1889			360 00	360 00
			625 00	4,899 91	22,114 60	27,639 51
Grist Mill, Mill Street, Cardinal.....	1	June 30, 1889		246 00		246 00
do at Matilda Lock.....	2	June 30, 1888	280 00	35 00		315 00
do do.....	3	June 30, 1889		180 00	210 00	390 00
Starch Factory, Edwardsburg.....	4	do			4,640 00	4,640 00
Tannery do.....	5	do			1,422 62	1,422 62
Part of Lot 6, Con. 1 do.....	6	June 30, 1888			40 00	40 00
Pasture Grounds, Galops Canal.....	7	Mar. 1, 1890		12 00		12 00
Wharf Lot No 2, Point Iroquois.....	8	Aug. 30, 1889			60 00	60 00
do 1 do.....	9	Dec. 1, 1889		48 00		48 00
Lot for School purposes at Matilda.....	10	May 1, 1889			1 00	1 00
Lot at Galops Canal.....	11	Aug. 1, 1889		5 00		5 00
Lot near do.....	12	do		5 00		5 00
Lot near upper entrance Galops Canal.....	13	Jan. 1, 1889		8 00		8 00
Part of Lot No. 32, Con. 1, Matilda.....	14	May 1, 1890		10 00	10 00	20 00

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APPENDIX

DR.

No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1888.	Accrued year ended 30th June, 1889.	Total.	Number.	Name of Works.	Present Occupant.	Original Lessee.
£ cts.	£ cts.	£ cts.				
35 00	35 00	35 00	15	Williamsburg Canal		Municipality of Iroquois
35 00	105 00	140 00	16	do		Corporation of the Village of Morrisburg
	140 00	140 00	17	do		M. F. Beach
6,471 62	1,056 00	7,527 62				
120 00	240 00	360 00	1	Cornwall Canal		Andrew Hodge
75 00	150 00	225 00	2	do	Permanent Loan Co.	A. F. Gault
270 00		270 00	3	do		W. D. & G. C. Wood
	135 00	135 00	4	do		Geo. Stephen
60 00	120 00	180 00	5	do		Stormont Cotton Co.
100 00	20 00	120 00	6	do		Henry Harrison
147 50		247 50	7	do		J. & C. H. Wood
	120 00	120 00	8	do		Toronto Paper Co.
	5 00	5 00	9	do		do
	25 00	25 00	10	do		Flack Bros.
	10 00	10 00	11	do		Loney & Campbell
872 50	825 00	1,697 50				
80 00	20 00	100 00	1	Beauharnois Canal	E. Dion	St. Amour & Co
20 00	20 00	40 00	2	do	do	J. Demers & Co.
100 00		100 00	3	do	N. Papineau	D. B. Pease
20 00	20 00	40 00	4	do		H. Larocque
717 00	358 50	1,075 50	5	do		A. Buntin
120 00	60 00	180 00	6	do	A. Buntin	Stephen May
180 00	120 00	300 00	7	do	T. & W. Bolduc	F. X. Poitras
60 00	120 00	180 00	8	do	Jas. Wattie	P. Poulin
	120 00	120 00	9	do	S. Vieau	J. Meloche
400 00	400 00	800 00	10	do		Montreal Cotton Co.
35 00	35 00	70 00	11	do		Lake St. Francis Nav. Co
	23 00	23 00	12	do	Valleyfield Canning Co.	R. N. Walsh
46 00	23 00	69 00	13	do		James Anderson
40 00	20 00	60 00	14	do		C. E. Wilson
20 00	20 00	40 00	15	do		Todd & Nicholson
40 00	20 00	60 00	16	do		Alex. McPhee & Co.
	10 00	10 00	17	do		O. Longtin
20 00	20 00	40 00	18	do		O. P. Dennie
	15 00	15 00	19	do		Estate A. Hodge
	14 00	14 00	20	do		Alex. Cockburn
	10 00	10 00	21	do	F. X. Barbeau	J. Larocque
8 00	4 00	12 00	22	do		Wm. Hood
40 00	40 00	80 00	23	do		Robert Steele
20 00	20 00	40 00	24	do		James Wattie
20 00	28 30	48 30	25	do		Montreal Cotton Co.
20 00	20 00	40 00	26	do		do
	20 00	20 00	27	do		Jas. McDonald
40 00		40 00	28	do		E. Bergin
5 00	5 00	10 00	29	do		Auguste Crivier
40 00	20 00	60 00	30	do		Moïse Julien
10 00	10 00	20 00	31	do		A. D'Aoust

A—Continued.

Lessees' Accounts, 1888-89—Continued.

CR.

Description of Property.	Number.	Date to which the Account is made up.	Abatement Authorized.	Paid during Fiscal Year.	Balance due June, 1889.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Water Lot and surplus Water for pumping engine.	15	June 30, 1889		35 00		35 00
Water Lot and Waterpower to drive pumping machine.	16	do		140 00		140 00
Grist Mill Lot at Matilda Lock	17	do		140 00		140 00
			280 00	864 00	6,383 62	7,527 62
Flour and Grist Mill, Lots 3 and 4.	1	June 30, 1889		240 00	120 00	360 00
Hydraulic Lot No. 6, south side.	2	do		150 00	75 00	225 00
Hydraulic Lots Nos. 1 and 2, north side.	3	June 30, 1878			270 00	270 00
Hydraulic Lot No. 7.	4	Jan. 1, 1889		135 00		135 00
do No. 6.	5	June 30, 1889		120 00	60 00	180 00
Wharf Lot, Moulinette	6	May 1, 1890		80 00	40 00	120 00
do near Lock No. 20	7	June 30, 1881			247 50	247 50
Surplus water for Paper Mill at Lock No. 18.	8	Jan. 1, 1889		120 00		120 00
Pipe under Canal above Lock 18.	9	April 1, 1890			5 00	5 00
Lot on south side Water Street for Coal Yard.	10	July 1, 1889		25 00		25 00
Tract of land south limit of Water St., Cornwall.	11	April 1, 1890			10 00	10 00
				870 00	827 50	1,697 50
Wharf Lot, St. Cecile, Valleyfield.	1	May 1, 1889			100 00	100 00
do do do	2	do			40 00	40 00
do St. Timothy	3	Jan. 1, 1864			100 00	100 00
do Valleyfield.	4	May 1, 1889			40 00	40 00
Paper Mill, Lots 1, 2 and 3, Valleyfield.	5	June 30, 1889	717 00		358 50	1,075 50
Grist Mill, Lot 5 do	6	do	120 00		60 00	180 00
Saw Mill, Lot 1 and Building Lot do	7	do		240 00	60 00	300 00
Woollen Mill, Lot 2 and B'lding Lot do	8	do		120 00	60 00	180 00
Lot at Lock No. 7, Melocheville.	9	do		60 00	60 00	120 00
Lots at head of Canal, Valleyfield.	10	do			800 00	800 00
Wharf and Shed above Guard Lock, Valleyfield.	11	May 1, 1890		35 00	35 00	70 00
Wharf and Storehouse do do	12	Aug. 1, 1889			23 00	23 00
do do do	13	June 30, 1889		23 00	46 00	69 00
do do do	14	Nov. 1, 1889			60 00	60 00
do do do	15	Oct. 1, 1889			40 00	40 00
do do do	16	do			60 00	60 00
Reserve do do do	17	Dec. 1, 1889		10 00		10 00
do do do	18	do		40 00		40 00
do do do	19	do		15 00		15 00
do do do	20	do		14 00		14 00
do head of Canal do	21	Sept. 1, 1889			10 00	10 00
Lot on Grande Island, east end of Dam.	22	April 1, 1890		12 00		12 00
Lot above Guard Lock, Valleyfield.	23	May 1, 1890		40 00	40 00	80 00
Lot in rear of Lots 1 and 2 do	24	July 1, 1889			40 00	40 00
Cadastral Lot 846, Grande Isle, Valleyfield.	25	Sept. 1, 1889		48 30		48 30
do 845 for a Public Park do	26	Jan. 1, 1890		20 00	20 00	40 00
do 830, part of do	27	July 1, 1889		20 00		20 00
Lot near St. Timothy Bridge do	28	Sept. 30, 1880			40 00	40 00
Lot for Public Scales above St. Timothy Bridge, Valleyfield.	29	Oct. 1, 1889		5 00	5 00	10 00
Lot for Shed above St. Timothy Bridge, Valleyfield	30	June 1, 1890			60 00	60 00
Lot for Store and Wharf above St. Timothy Bridge, Valleyfield.	31	May 1, 1890			20 00	20 00

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APPENDIX

No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1888.	Accrued year ended 30th June, 1889.	Total.	Number.	Name of Work.	Present Occupant.	Original Lessee.
£ cts.	£ cts.	£ cts.				
10 00	10 00	20 00	32	Beauharnois Canal.	D'Aoust & Leduc.....	A. McPhee & Co.....
10 00	10 00	20 00	33	do	.....	Auguste Lespérance....
.....	30 00	30 00	34	do	.....	Louis Leduc.....
.....	20 00	20 00	35	do	.....	Lake St. Francis Tow Boat Co.....
.....	20 00	20 00	36	do	.....	Eusèbe French.....
22 50	.....	22 50	37	do	.....	Moïse Lalande.....
16 00	8 00	24 00	38	do	.....	S. A. Brodeur.....
.....	40 00	40 00	39	do	.....	John H. Wilson.....
15 00	15 00	30 00	40	do	J. F. Nicholson..	Col. McPhee.....
.....	1 00	1 00	41	do	.....	Canada Mutual Tele graph Co.....
40 00	40 00	80 00	42	do	.....	Onézime Tremplé.....
.....	52 50	52 50	43	do	.....	Valleyfield Electric Co..
.....	105 00	105 00	44	do	.....	Corporation of Town of Salaberry.....
.....	15 00	15 00	45	do	.....	Estate late, James Mc- Donald.....
40 00	20 00	60 00	46	do	James T. Anderson..	Joseph Cardinal.....
.....	1,000 00	1,000 00	47	do	.....	A. Buntin.....
.....	60 00	60 00	48	do	.....	do.....
2,254 50	3,062 30	5,316 80				
215 00	430 00	645 00	1	Lachine Canal.....	.....	Pillow, Hersey & Co....
215 00	430 00	645 00	2	do	.....	do.....
215 00	430 00	645 00	3	do	.....	Lyman, Sons & Co.....
430 00	860 00	1,290 00	4	do	Montreal Warehousing Co.....	Grant, Hall & Co.....
.....	430 00	430 00	5	do	.....	Peck, Benny & Co.....
.....	650 00	650 00	6	do	.....	do.....
840 00	1,680 00	2,520 00	7	do	Ira Gould & Son.....	Young & Gould.....
.....	50 00	50 00	8	do	.....	Dominion Bridge Co....
.....	10 00	10 00	9	do	E. V. Moseley & Co....	Moseley & Rickers.....
.....	30 00	30 00	10	do	Beauharnois Steam Navi- gation Co.....	Henry Shackell.....
.....	60 00	60 00	11	do	Jas. Wilson, jr.....	M. K. Dickinson.....
.....	1 00	1 00	12	do	.....	A. Cantin.....
.....	1,296 00	1,296 00	13	do	Ira Gould & Son.....	Ira Gould.....
800 50	1,601 00	2,401 50	14	do	Est. J. Frothingham....	Wm. Parkyn.....
.....	1 00	1 00	15	do	.....	Corporation of Montreal
6,000 00	1,000 00	7,000 00	16	do	George Tait.....	G. & W. Tait.....
196 00	392 00	588 00	17	do	.....	Frothingham & Work- man.....
132 00	264 00	396 00	18	do	H. McLennan.....	do.....
.....	430 00	430 00	19	do	.....	Peck, Benny & Co.....
.....	100 00	100 00	20	do	Montreal Transportation Co.....	J. B. Auger & Co.....
.....	700 00	700 00	21	do	.....	Montreal Warehousing Co.....

A—Continued.

Lessees' Accounts, 1888-89—Continued.

CR.

Description of Property.	Number.	Date to which the Account is made up.	Abatement Authorized.	Paid during Fiscal Year.	Balance due 30th June, 1889.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Lot for Store and Wharf below St. Timothy Bridge, Valleyfield.....	32	Oct. 1, 1889	.....	.....	20 00	20 00
do do do.....	33	May 1, 1890	.....	10 00	10 00	20 00
Lot for Ship Yard above Guard Lock, Valleyfield.....	34	Sept. 1, 1889	.....	30 00	.....	30 00
Lot for Wharf north of do do.....	35	July 1, 1889	.....	.....	20 00	20 00
Part of Lot 1 for Piling Ground above Guard Lock, Valleyfield.....	36	Sept. 1, 1890	.....	.....	20 00	20 00
Part of Lot 1 for Lumber Yard above Guard Lock, Valleyfield.....	37	do 1, 1887	22 50	.....	.....	22 50
Lot above Guard Lock, Valleyfield.....	38	Oct. 1, 1889	.....	.....	24 00	24 00
Part of Lot 1 for Coal Yard, above Guard Lock, Valleyfield.....	39	July 1, 1889	.....	40 00	.....	40 00
Wharf Lot, south side Canal, above Guard Lock, Valleyfield.....	40	Nov. 15, 1889	.....	.....	30 00	30 00
Privilege of placing poles on Canal Bank.....	41	Oct. 1, 1889	.....	1 00	.....	1 00
Part of Lot 1, Valleyfield.....	42	Sept. 1, 1889	.....	.....	80 00	80 00
Portion of Lot 830, Valleyfield.....	43	July 1, 1889	.....	52 50	.....	52 50
do 830 and privilege to construct a flume to Grande Isle.....	44	do 1, 1889	.....	52 50	52 50	105 00
do 830, Valleyfield.....	45	Oct. 1, 1889	.....	15 00	.....	15 00
Lots 101 and 116, Valleyfield.....	46	June 1, 1890	.....	20 00	40 00	60 00
Lots Nos. 1, 2, 3, 4 and 5, below lower dam—Valleyfield.....	47	Jan. 1, 1889	.....	1,000 00	.....	1,000 00
Lot on Corner of St. Timothy and Lower dam Road—Valleyfield.....	48	May 1, 1890	.....	40 00	20 00	60 00
			859 50	1,963 30	2,494 00	5,316 80
Spike and Nail Factory, Lot 15.....	1	June 30, 1889	.....	430 00	215 00	645 00
do do 16.....	2	do 30, 1889	.....	430 00	215 00	645 00
Paint Mill, Lot 17.....	3	do 30, 1889	.....	430 00	215 00	645 00
Grist and Flour Mill, Lots 18 and 19.....	4	do 30, 1889	.....	860 00	430 00	1,290 00
do do 11.....	5	April 1, 1889	.....	430 00	.....	430 00
Elevator and Store, Lots 9 and 10.....	6	do 1, 1889	.....	650 00	.....	650 00
Surplus water at Lock No. 3.....	7	June 30, 1889	.....	1,680 00	840 00	2,520 00
Water supply below Guard Lock, Lachine.....	8	July 1, 1889	.....	50 00	.....	50 00
do at Grand Trunk Crossing.....	9	Oct. 1, 1889	.....	10 00	.....	10 00
Freight Shed at Basin No. 1.....	10	May 1, 1890	.....	30 00	.....	30 00
Store at Basin No. 1.....	11	do 1, 1890	.....	60 00	.....	60 00
Water Lot in front of his Dry Dock.....	12	April 1, 1889	.....	1 00	.....	1 00
Flour Mill and Store on Lots 12, 13 and 14.....	13	do 1, 1889	.....	1,296 00	.....	1,296 00
Water power, Cote St. Paul, Lock No. 4.....	14	June 30, 1889	.....	1,601 00	800 50	2,401 50
Privilege of Floating Bath, near Wellington Bridge.....	15	July 1, 1889	.....	1 00	.....	1 00
Dry Dock, Ship Yard and Mill, Basin No. 2.....	16	June 30, 1889	.....	1,000 00	6,000 00	7,000 00
Warehouse and Coal Yard, Lot No. 1.....	17	June 30, 1889	.....	392 00	196 00	588 00
Grain Elevator on $\frac{1}{2}$ Lot No. 2.....	18	do	.....	264 00	132 00	396 00
do do No. 8.....	19	May 22, 1889	.....	430 00	.....	430 00
Part of Island No. 5, for a Shipyard.....	20	July 1, 1888	100 00	100 00
Land at Basin No. 4.....	21	Aug. 1, 1889	700 00	700 00

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APPENDIX

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No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1888.	Accrued, year ended 30th June, 1889.	Total.	Number.	Name of Work.	Present Occupant.	Original Lessee.
£ cts.	£ cts.	£ cts.				
564 00	1,128 00	1,692 00	22	Lachine Canal....	S. Delisle.....	S. Delisle.....
322 50	645 00	997 50	23	do	Maltby & King.....	W. P. Bartley.....
322 50	645 00	997 50	24	do	Wm. Johnson & Co.....	do
	25 00	25 00	25	do	Peck, Benny & Co.....	do
375 00		375 00	26	do		G. E. Jacques & Co.....
			27	do		St. Lawrence Sugar Refining Co.....
	200 00	200 00	28	do		Merchants Manufacturing Co.....
	1 00	1 00	29	do		Corporation of Montreal.
	150 00	150 00	30	do		Acer & Kennedy.....
605 00	600 00	1,200 00	31	do		C. M. Acer.....
	25 00	25 00	32	do		Dominion Abbatoir Co..
	180 00	180 00	33	do	P. McRory.....	Vital Paradis.....
	40 00	40 00	34	do		Dominion Barb Wire Co.
	10 00	10 00	35	do		Wm. Clark.....
	300 00	300 00	36	do		Henderson Bros.....
253 94	380 92	634 86	37	do		P. Poulin.....
1,102 93	1,102 93	2,205 86	38	do		H. Bulmer, jr., & Bro..
420 75	420 75	841 50	39	do		O. Dufresne, jr., & Bro..
684 44	684 44	1,368 88	40	do		Bourgouit & Thibault...
2,554 12		2,554 12	41	do		Henderson Lumber Co..
428 08	174 40	602 48	42	do		P. McRory.....
	100 00	100 00	43	do		Warren Scarf Asphalt Paving Co.....
	30 00	30 00	44	do		E. Oullette.....
253 68	253 68	507 36	45	do		D. Pariseau.....
	562 00	562 00	46	do		Montreal Harbor Commissioners
	10 00	10 00	47	do		A. W. Ogilvie & Co....
	1 00	1 00	48	do		City of Montreal.....
	120 00	120 00	49	do		Grand Trunk Railway..
	10 00	10 00	50	do		C. P. R. Co.....
	1 00	1 00	51	do		Montreal Street Ry....
	75 00	75 00	52	do		Richelieu Navigation Co
	40 00	40 00	53	do		Wm. Davis & Sons.....
	50 00	50 00	54	do		J. R. Walker.....
	10 00	10 00	55	do		Albert Fox.....
	725 44	725 44	56	do		H. Bulmer, jr., & Bro..
	600 00	600 00	57	do		Dobell, Beckett & Co...
	1,000 00	1,000 00	58	do		do
	1,000 00	1,000 00	59	do		Hurteau Bros.....
	1,600 00	1,600 00	60	do		J. Burstall & Co.....
	2,133 32	2,133 32	61	do		Dobell, Beckett & Co...
	30 00	30 00	62	do		P. Lamothe.....
	10 00	10 00	63	do		Lalonde & Levesque...
16,925 44	25,919 88	42,845 32				
7 50		7 50	1	Chambly Canal....		J. A. Maurice.....
	60 00	60 00	2	do		South-Eastern Ry. Co..
20 00	10 00	30 00	3	do		Catelli Bros.....
19 34		19 34	4	do		J. C. Pierce & Son....
50 00		50 00	5	do		Bissett & Donaghy....
50 00		50 00	6	do		Simard & Godin.....
25 00		25 00	7	do		Jas. O. Cain.....
171 84	70 00	241 84				

A—Continued.

Lessees' Accounts, 1888-89—Continued.

CR.

Description of Property.	Number.	Date to which the Account is made up.	Abatement authorized.	Paid during Fiscal Year.	Balances due 30th June, 1889.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Floating Bath near Brewster's Bridge.....	22	Aug. 1, 1889		1 00		1 00
Lots 3 and 4, and $\frac{1}{2}$ Lot No. 2, Basin No. 2.....	23	June 30, 1889		1,128 00	564 00	1,692 00
Flour Mill, Lots 5 and $\frac{1}{2}$ No. 6 do	24	do		645 00	322 50	967 50
Nail Factory, Lots 7 and $\frac{1}{2}$ No. 6 do	25	do		645 00	322 50	967 50
Lot for Office, Colborne street, Montreal.....	26	July 1, 1889		25 00		25 00
Water supply through a 10 inch pipe, Basin No 1.	27	June 30, 1889	375 00			375 00
do do St. Henri.....	28	Jan. 1, 1889		200 00		200 00
Lot for a Public Park near Wellington Bridge....	29	July 1, 1888		1 00		1 00
Lot for a Cattle Yard, Point St. Charles.....	30	Feb. 1, 1889		150 00		150 00
Lot for an Hotel, Point St. Charles.....	31	Dec. 1, 1890		600 00	600 00	1,200 00
Water supply to their establishment, St. Henri....	32	July 1, 1889		25 00		25 00
Wharf Lot at St. Gabriel.....	33	Jan. 1, 1890		180 00		180 00
Water supply below Guard Lock No. 5.....	34	Sept. 1, 1889		40 00		40 00
do to Factory on Canal St., Montreal.....	35	do		10 00		10 00
Two Lots on Ottawa Street, Montreal.....	36	Nov. 1, 1889		300 00		300 00
Lots 1 and 2, West St. Gabriel's Basin, No. 4.....	37	Jan. 1, 1890		634 86		634 86
Lots 3, 4, 5, 6 and 7, St. Gabriel's Basin, No. 4....	38	May 1, 1890		1,102 93	1,102 93	2,205 86
Lots 8 and 9, St. Gabriel's Basin, No. 3.....	39	do		841 50		841 50
Lots 12, W, and 15 and 16, St. Gabriel's Basin, No. 3.....	40	do		684 44	684 44	1,368 88
Lots 19 and 22 W. St. Gabriel's Basin, No. 3, and 13 and 14 E. St. Gabriel, No. 2	41	May 1, 1889			2,554 12	2,554 12
Lot 21, St. Gabriel's Basin, No. 2.....	42	May 1, 1890	203 64	398 84		602 48
Lot at St. Gabriel's near Atwater Ave., Montreal.	43	Oct. 1, 1889		100 00		100 00
Lot above regulating Weir	44	May 1, 1890		30 00		30 00
Lot 17, E. St. Gabriel's Basin.....	45	do		507 36		507 36
Motive power for lighting wharves.....	46	Sept. 1, 1888		562 00		562 00
Strip of land, N.W. side Mill St., Basin No. 2.....	47	do 1, 1889		10 00		10 00
Lot on S.W. side Waste Wier do	48	do 1, 1889		1 00		1 00
Siding W. side Wellington Street Bridge.....	49	Aug. 1, 1889		120 00		120 00
Privilege to lay a track on Spoil Bank, Lachine....	50	May 1, 1890		10 00		10 00
Double track over Wellington Street Bridge.....	51	Jan. 1, 1890		1 00		1 00
Freight shed, Basin No. 1.....	52	May 1, 1890		75 00		75 00
Lot above new upper entrance to Lock	53	do 1, 1890		40 00		40 00
Space in shed, Basin No. 1.....	54	July 14, 1889		50 00		50 00
Water supply through 2-inch pipe, Côte St. Paul.	55	Nov. 1, 1889		10 00		10 00
Lots 10 and 11, W. Saint Gabriel Basin, No. 3.....	56	May 1, 1890	3 63	359 09	362 72	725 44
Space in shed No. 1, Saint Gabriel Basin.....	57	do 1, 1889		600 00		600 00
do do 2, do do	58	do 1, 1889		1,000 00		1,000 00
Lots 1, 2 and 3, W. Basin, for piling lumber.....	59	do 1, 1889		1,000 00		1,000 00
do 8, 9 and 10 do do	60	do 1, 1889		1,600 00		1,600 00
do 4, 5, 6 and 7 do do	61	do 1, 1889		2,133 32		2,133 32
Privilege to build vessels on canal bank, for winter of 1889.....	62			30 00		30 00
Space in shed No. 1, for a Rink.....	63			10 00		10 00
			582 27	26,706 34	15,556 71	42,845 32
Two lots of land, Chambly	1	May 1, 1878			7 50	7 50
Wharf lot at St. Joseph	2	June 30, 1889		60 00		60 00
Lot in village, Chambly.....	3	May 1, 1890		20 00	10 00	30 00
Wharf at St. John's	4	Nov. 19, 1881			19 34	19 34
Part of Canal Wharf at St. Johns.....	5	June 30, 1888			50 00	50 00
do do	6	do 30, 1888			50 00	50 00
do do	7	do 30, 1888			25 00	25 00
				80 00	161 84	241 84

APPENDIX

Dr.

No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1889.	Accrued year ended 30th June, 1888.	Total.	Number.	Name of Work.	Present Occupant.	Original Lessee.
\$ cts.	\$ cts.	\$ cts.				
	40 00	40 00	1	Rideau Canal.....		G. Sterling.....
1 00		1 00	2	do.....		Ottawa Canoe Club.....
	80 00	80 00	3	do.....		Thos. McKay.....
20 00	40 00	60 00	4	do.....		G. W. McCullough.....
80 00	80 00	160 00	5	do.....		J. G. Butterworth.....
	80 00	80 00	6	do.....		Day Bros.....
120 00		120 00	7	do.....		J. W. McRae & Co.....
3 00	1 00	4 00	8	do.....		Corporation of the City of Ottawa.....
200 00		200 00	9	do.....		Wm. Little.....
31 25		31 25	10	do.....		Rideau Skating and Curling Club.....
2 00	1 00	3 00	11	do.....	Robert Hastey.....	John Heney.....
8 00	2 00	10 00	12	do.....		John Neville.....
2 00	1 00	3 00	13	do.....		Corporation of the City of Ottawa.....
	100 00	100 00	14	do.....		Bronson & Weston.....
	1 00	1 00	15	do.....		R. W. Baxter.....
	2 00	2 00	16	do.....		Andrew Hickey.....
	13 50	13 50	17	do.....		H. Patterson.....
	1 00	1 00	18	do.....		John Graham.....
	9 00	9 00	19	do.....		Catharine O'Neill.....
	2 00	2 00	20	do.....		Thomas Kingston.....
	2 00	2 00	21	do.....		J. G. White.....
8 00	2 00	10 00	22	do.....		Robt McCloy.....
	1 00	1 00	23	do.....	Canada Atlantic Railway Company.....	H. Jackson.....
	10 00	10 00	24	do.....		Temporal Committee St. Andrew's Church...
13 00	13 00	26 00	25	do.....		Michael Keily.....
	9 50	9 50	26	do.....		P. O'Donnell.....
9 00	9 00	18 00	27	do.....		Jas. Marks.....
1 00	1 00	2 00	28	do.....		Henry Hartney.....
	1 00	1 00	29	do.....		L. Duhamel.....
10 00	2 00	12 00	30	do.....		Henry James.....
	2 00	2 00	31	do.....		George May.....
	25 00	25 00	32	do.....	Canadian Pacific Railway	St. L. & O Ry. Co.....
96 00	12 00	108 00	33	do.....		R. E. Hardy.....
57 75	8 25	66 00	34	do.....		M. Kilroe.....
14 00	2 00	16 00	35	do.....		Francis Abbott.....
21 00	3 00	24 00	36	do.....		do.....
21 00	3 00	24 00	37	do.....		do.....
	25 00	25 00	38	do.....		J. R. Booth.....
16 00	2 00	18 00	39	do.....		Widow A. Howlett.....
12 00	3 00	15 00	40	do.....		Wm. Rowland.....
	3 75	3 75	41	do.....		George Rickey.....
135 00	22 50	157 50	42	do.....		W. Dawson.....
135 00	11 25	146 25	43	do.....		Thomas Paget.....
123 75	11 25	135 00	44	do.....		Chas. McCaffrey.....
39 00	9 75	48 75	45	do.....		George Morris.....
24 75	8 25	33 00	46	do.....		Wm. Powell.....
49 50	8 25	57 75	47	do.....		Philip Kennedy.....
54 75	7 50	62 25	48	do.....		Daniel Delaney.....
	7 50	7 50	49	do.....		Denis Bergin.....
			50	do.....		Geo. Merrick.....
	3 00	3 00	51	do.....		Thomas May.....
15 75	2 25	18 00	52	do.....		D. Cameron.....

A—Continued.

Lessees' Accounts, 1888-89—Continued.

Dr.

Description of Property.	Number.	Date to which the Account is made up.	Abatement Authorized.	Paid during Fiscal Year.	Balances due 30th June, 1889.	Total.
			% cts.	% cts.	\$ cts.	\$ cts.
Water Lot, foot of Major's Hill, Ottawa.....	1	Jan. 1, '89..		40 00		40 00
do do do do do	2	June 1, '89..		1 00		1 00
Green Island, above Rideau Falls do	3	Jan. 1, '89..		80 00		80 00
Lot for Coal Shed, Canal Basin do	4	June 30, '89..			60 00	60 00
Lots 1 & 2 do do do	5	June 30, '90..		80 00	80 00	160 00
Lots 4, 5, 6 & 7, Boat House, C. Basin do	6	May 1, '90..		80 00		80 00
Lot 1, S. E. Canal Basin do	7	April 1, '82..			120 00	120 00
Lot for a Weigh House, W. Canal Basin do	8	May 1, '90..		2 00	2 00	4 00
Lot for dwelling, S. side Deep Cut do	9	April 1, '88..			200 00	200 00
Reserve for Club House do do	10	July 1, '88..			31 25	31 25
do on S. side do do	11	Sep. 1, '89..			3 00	3 00
do in front of his prop., Deep Cut do	12	Jan. 1, '90..			10 00	10 00
Strip of Reserve at Exhibition Grounds do	13	Jan. 1, '90..		2 00	1 00	3 00
Lots for Piling Grounds, Stewarton do	14	Aug. 1, '89..		100 00		100 00
Reserve in front of Lot G, Con. C, Nepean	15	Jan. 1, '90..		1 00		1 00
do do G, Con. C do	16	Dec. 1, '89..			2 00	2 00
do do S. $\frac{1}{2}$ Lot G, Con. C do	17	Jan. 1, '90..		13 50		13 50
do do N. $\frac{1}{2}$ Lot G, Con. C do	18	Jan. 1, '90..		1 00		1 00
do do Lot L, Con. C do	19	Aug. 1, '89..		9 00		9 00
do do F, Con. C do	20	Nov. 1, '89..			2 00	2 00
do do K, Con. C do	21	Aug. 1, '89..		2 00		2 00
do do K, Con. C do	22	Nov. 1, '89..			10 00	10 00
do do B, Con. C do	23	Jan. 1, '90..			1 00	1 00
do do H, Con. C do	24	Jan. 1, '90..		10 00		10 00
Reserve on Lot No. Con. D do	25	May 1, '90..		13 00	13 00	26 00
do on Lot E, Con. D do	26	May 1, '90..			9 50	9 50
do in front of Lot No. 1, Con. B, Nepean	27	Jan. 1, '90..			18 00	18 00
do in front of Sub-Lots Nos. 64 and 65 Lot 1, Con. D, Nepean	28	June 1, '90..		1 00	1 00	2 00
Reserve in front of Lot K, Con. B, Nepean	29	Jan. 1, '90..		1 00		1 00
Reserve in front of Sub-Lot No. 5, Con. B, Nepean	30	Jan. 1, 1890			12 00	12 00
Wharf privilege on Sub-Lots 29 & 30 do do	31	do		2 00		2 00
Right of way over Lots 8 & 9 (Dow's Swamp) Con. B, Nepean	32	do			25 00	25 00
Reserve on Lots No. 22 & 23 Con. A, Nepean	33	Jan. 1, 1889		24 00	84 00	108 00
do N $\frac{1}{2}$ Lot 8 do	34	Jan. 1, 1890		20 00	46 00	66 00
do do 40 1 O.F. do	35	July 1, 1888			16 00	16 00
do do 40 1 O.F. do	36	Nov. 1, 1889			24 00	24 00
do do 40 1 do	37	do			24 00	24 00
do do 5 $\frac{1}{4}$ acres 40 1 do	38	Sept. 1, 1889		25 00		25 00
do do 40 1 O.F. do	39	July 1, 1889			18 00	18 00
do do N 1 do	40	June 1, 1890			15 00	15 00
do do 1 2 do	41	Jan. 1, 1890		3 75		3 75
do do 3 2 do	42	do			157 50	157 50
do do N $\frac{1}{2}$ Lot 4 2 do	43	do			146 25	146 25
do do S Lot 4 2 do	44	do			135 00	135 00
do do S Lot 5 2 do	45	do		29 25	19 50	48 75
do do N Lot 5 2 do	46	Dec. 1, 1889			33 00	33 00
do do S Lot 6 2 do	47	Jan. 1, 1890		41 25	16 50	57 75
do do S Lot 8 2 do	48	Dec. 1, 1888			62 25	62 25
do do N Lot 6 2 do	49	Jan. 1, 1890			7 50	7 50
Water Lot at Hogsback Station, Gloucester	50	do				
Reserve on $\frac{1}{2}$ Lot No. 23 R. front do	51	Jan. 1, 1890		3 00		3 00
do N $\frac{1}{2}$ Lot No. 22 Con. 1 do	52	do			18 00	18 00

APPENDIX

DR.

No. 28.—HYDRAULIC and other Rents, &c.—

Balance due on 1st July, 1888.	Accrued, year ended 30th June, 1889.	Total.	Number.	Name of Work.	Present Occupant.	Original Lessee.
% cts.	% cts.	% cts.				
4 00	4 00	8 00	53	Rideau Canal.....		T. & P. Collins.....
	50 00	50 00	54	do		Lon. & Can. Loan Co...
20 00	10 00	30 00	55	do		Stafford Merrifield.....
	4 50	4 50	56	do		Geo. Shepherd.....
10 00	5 00	15 00	57	do		A. C. White.....
5 00	5 00	10 00	58	do		Alfred Chester.....
	20 00	20 00	59	do		Jessie Miner.....
	1 00	1 00	60	do		Josiah Payne.....
	12 00	12 00	61	do		Hiram Easton.....
25 00	5 00	30 00	62	do		Henry Merrick.....
4,380 00	120 00	4,500 00	63	do	R. Ward.....	Joshua Bates.....
0 60	0 20	0 80	64	do		A. Wood
1 00	1 00	2 00	65	do		Smith's Falls Cur. Clb...
	2 00	2 00	66	do		Wm. Lavender.....
	3 00	3 00	67	do		W. W. Berford, sr.....
18 00	3 00	21 00	68	do		J. B. & B. Tett.....
	20 00	20 00	69	do		Wm. H. Whealey.....
	1 00	1 00	70	do		W. J. Webster.....
	5 00	5 00	71	do		B. E. Chaffey.....
52 50		52 50	72	do		Wm. Anglin.....
	76 00	76 00	73	do		do
52 50	105 00	157 50	74	do	J. S Foster.....	M. J. Foster.....
	105 00	105 00	75	do	J. A. Kirkpatrick.....	John Rourke.....
20 00	10 00	30 00	76	do		John Brannigan.....
5,912 10	1,252 20	7,164 30				
	5 00	5 00	1	Grenville Canal.....		A. J. Grier.....
	10 00	10 00	2	Carillon Canal.....		Henry E. Mason.....
	10 00	10 00	3	do		John Brophy.....
24 00		24 00	4	do		John Morrison.....
1 00	1 00	2 00	5	St. Ann's Lock.....		Delphus Lebean.....
1 00		1 00	6	do		Canada Mutual Telegraph Co.....
	1 00	1 00	7	do		Dominion Telegraph Co.....
50 00	50 00	100 00	8	Trent River Works		Francis Sandford.....
160 00		160 00	9	do		H. B. J. Williams, Estate
160 00	40 00	200 00	10	do		James Cummings.....
2 00	1 00	3 00	11	do		Bell Telephone Co.....
	1 00	1 00	12	Cape Breton.....		Neil McNeil.....
398 00	119 00	517 00				

A—Continued.

Lessees' Accounts, 1888-89—Continued.

Cr.

Description of Property.	Number.	Date to which the Account is made up.	Abatement Authorized.	Paid during Fiscal Year.	Balances due 30th June, 1889.	Total.
			\$ cts.	\$ cts.	\$ cts.	\$ cts.
Reserve on N $\frac{1}{2}$ Lot No. 9 Con. 1, Gloucester....	53	Jan. 1, 1889		4 00	4 00	8 00
Surplus water at Bulk Head, Long Island.....	54	do			50 00	50 00
Reserve in front of Lot No. 40 Con. 1, Oxford....	55	July 1, 1889			30 00	30 00
do front of Lot No. 40 Con. 1 do	56	June 1, 1890		4 50		4 50
Reserve on W $\frac{1}{2}$ Lot No. 27 Con. 1 Marlboro....	57	Jan. 1, 1890			15 00	15 00
do Lot No. 3 Con. B Walford.....	58	July 1, 1889		5 00	5 00	10 00
do Lot No. 2 Con. B do	59	July 1, 1890		20 00		20 00
Portion of Lot 9 Con. A, Walford, Merrickville....	60	April 1, 1890		1 00		1 00
Lot above old lock, Merrickville	61	Dec. 1, 1888			12 00	12 00
Reserve near swing bridge, Merrickville.....	62	Jan. 1, 1890			30 00	30 00
Lots A and B, Old Sly's	63	May 1, 1889			4,500 00	4,500 00
Part Reserve on Lot 1, Con. 4, at Smith's Falls....	64	June 30, 1889			0 80	0 80
do 1 4 do	65	Nov. 1, 1889		1 00	1 00	2 00
do 2 4, Elmsly	66	Jan. 1, 1889		2 00		2 00
Part of Lot 21, Con. 5, S. Elmsly, at Oliver's Ferry	67	May 1, 1890			3 00	3 00
Strip of land and warehouse near Isthmus Lock Station, Newboro'	68	May 1, 1889	18 00	3 00		21 00
Part of Lot 1, Con. 5, North Crosby, Newboro'.	69	Sept. 1, 1889		20 00		20 00
do do do	70				1 00	1 00
Water Lot at Chaffey's Lock	71	June 30, 1889			5 00	5 00
Water Power at Brewer's Upper Mills, Old Lease	72	Jan. 1, 1889	52 50			52 50
do do do New do	73	do			76 00	76 00
do do Lower do	74	do			157 50	157 50
Water Power on Lot 38, Con. 1, Kingston	75	July 1, 1889		105 00		105 00
Reserve on Lots 35 & 36, do 1, do	76	Aug. 1, 1880			30 00	30 00
			70 50	750 25	6,343 55	7,164 30
House and Grounds on Lot No. 8.....	1	May 1, 1890			5 00	5 00
Lot for pasture.....	2	June 30, 1890		10 00		10 00
do	3	do		10 00		10 00
Part of Lot 9, Range 1, Chatham.....	4	Nov. 1, 1887	24 00			24 00
Lots 112 and 113, St. Ann's Parish.....	5	Sept. 1, 1889			2 00	2 00
Placing Poles on Government Reserve.....	6	July 1, 1884			1 00	1 00
do do	7	May 1, 1890		1 00		1 00
Lot at Fenelon Falls	8	Dec. 1, 1889		50 00	50 00	100 00
Water Power at Buckhorn Rapids.....	9	June 30, 1888	160 00			160 00
Lot and Lock house, Chisholm's Rapids.....	10	June 30, 1889		80 00	120 00	200 00
Privilege to place Poles on various Canals.....	11	June 1, 1890			3 00	3 00
Lot at Long Island, Barochais.....	12	April 1, 1889		1 00		1 00
			184 00	152 00	181 00	517 00

APPENDIX

Dr.

N. 28.—HYDRAULIC and other Rents, &c.—

Balance due on Purchase 1st July, 1888.	Accrued, Year ended 30th June, 1889.	Total.	Number.	Name of Work.	Name of Proprietor.
£ cts.	£ cts.	£ cts.			LAND SALES, PRINCIPAL AND INTEREST.
54 38		54 38	1	Intercolonial Railway.	John and William Sproule.....
50 59		50 59	2		John Ferguson.....
59 15		59 15	3		Joseph Graham.....
13 06		13 06	4		Paul Foster.....
14 21		14 21	5		Donald McArthur.....
4 00		4 00	6		Cornelius Dyer.....
33 59		33 59	7		John Foster.....
0 35		0 35	8		William and John T. Ives.....
96 66		96 66	9		Christie Family.....
4 90		4 90	10		A. W. Tanner.....
23 29		23 29	11		William and Alexander Scott.....
5,996 74	287 00	6,283 74	12	Lachine Canal.....	P. Turcott, now Estate R. A. R. Hubert...
6,350 92	287 00	6,637 92			

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

A—Concluded.

Lessees' Accounts, 1888-89—Concluded.

Cr.

Description of Property.	Number.	Abatement Author- ized.	Paid during Fiscal Year.	Balances due 30th June, 1889.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.
1 $\frac{1}{2}$ acres of land, Pictou, Nova Scotia.....	1			54 38	54 38
3 $\frac{3}{100}$ do do	2			50 59	50 59
2 $\frac{5}{100}$ do do	3			59 15	59 15
4 $\frac{5}{100}$ do do	4			13 06	13 06
9 $\frac{2}{100}$ do do	5			14 21	14 21
1 $\frac{1}{100}$ do do	6			4 00	4 00
8 $\frac{0}{100}$ do do	7			33 59	33 59
1 $\frac{0}{100}$ do do	8			0 35	0 35
3 $\frac{0}{100}$ do do	9			96 66	96 66
1 $\frac{0}{100}$ do do	10			4 90	4 90
1 $\frac{0}{100}$ do do	11			23 29	23 29
Farm, Côte St. Paul.....	12			6,283 74	6,283 74
				6,637 92	6,637 92

C. E. CHUBBUCK,

Clerk of Hydraulic Rents.

APPENDIX B.

No. 1.—DETAILS of Canal Expenditure, 1888-89.

Canals.	Names of Employés.	Deducted for Superannuation.	Amounts Paid.	Total.
		\$ cts.	\$ cts.	\$ cts.
<i>Welland Canal.</i>				
Port Colborne.....	McFarland, D. E., salary as Collector for the year.....	28 00	1,372 00	
do	Leggett, J. E., salary as Clerk for the year.....	16 00	784 00	
do	Schofield, J. S. do	10 00	490 00	
do	Hain, J. R. do	11 00	539 00	
	Salaries.....	65 00	3,185 00	
	Contingencies		291 53	
				3,476 53
Port Dalhousie.....	Clark, W. B., salary as Collector for the year.....	20 00	980 00	
do	Pirritte, J., salary as Clerk for the year.....	16 00	784 00	
	Salaries.....	36 00	1,764 00	
	Contingencies		362 84	
				2,126 84
Dunnville	Tipton, T. L. M., salary as Collector for the year ..	15 00	735 00	
	Contingencies		36 19	
				771 19
Port Maitland.....	Galbraith, T. J., salary as Collector for the year...	10 00	490 00	
	Contingencies		85 00	
				575 00
Port Robinson.....	Coulter, R., salary as Collector for the year.....	14 40	705 60	
	Contingencies		32 94	
				738 54
St. Catharines	Collier, H. H., salary as Collector for the year....	4 00	196 00	
	Contingencies		6 75	
				202 75
Chippawa	Harvey, T. B., salary as Collector for the year....	2 00	98 00	
	Contingencies		30 50	
				128 50
	Total, Welland Canal.....			8,019 35
<i>St. Lawrence Canals.</i>				
Beauharnois	Danis, A. D., salary as Collector for the year.....	17 00	833 00	
do	Lefebvre, H., salary as Clerk for the year.....		366 00	
	Salaries.....	17 00	1,199 00	
	Contingencies		111 83	
				1,310 83
Cardinal	Reid, J., salary as Collector for the year.....	15 00	735 00	
do	McMillan, R. P., salary as Clerk for the year.....	5 00	395 00	
	Salaries.....	20 00	1,130 00	
	Contingencies		75 25	
				1,205 25
Cornwall	Phelan, J. A., salary as Collector for the year....	20 00	980 00	
do	Mulhern, M. M., salary as Clerk for the year.....	2 00	98 00	
	Salaries.....	22 00	1,078 00	
	Contingencies.....		680 90	
				1,758 90
Kingston	Burrows, Wm., salary as Collector for the year....	12 00	588 00	
do	Fahey, E., salary as Clerk for the year.....	10 00	490 00	
	Salaries.....	22 00	1,078 00	
	Contingencies.....		116 59	
				1,194 59

APPENDIX B.—*Continued.*No. 1.—DETAILS of Canal Expenditure, 1888-89—*Continued.*

Canals.	Names of Employés.	Deducted for Superannuation.	Amounts Paid.	Total.
		\$ cts.	\$ cts.	\$ cts.
<i>St. Lawrence Canals.</i>				
Lachine	Paré, L., salary as Collector for the year	20 00	980 00	2,169 15
do	Deschamp, J. B., salary as Collector for the year ..	14 00	686 00	
	Salaries	34 00	1,666 00	
	Contingencies		503 15	
Montreal	O'Neill, J., salary as Collector for the year	40 00	1,960 00	8,196 70
do	McNally, T., salary as Clerk for the year	24 00	1,176 00	
do	Bussière, F. do do	18 00	882 00	
do	St. Louis, J. do do	18 00	882 00	
do	Arahill, J. do do	16 00	784 00	
do	Giroux, A. P. do do	14 00	686 00	
do	Pelletier, P. do do	12 00	588 00	
	Salaries	142 00	6,958 00	
	Contingencies		1,238 70	
Total, St. Lawrence Canals				15,835 42
<i>Chambly Canal.</i>				
Chambly	Martel, M. D. S., salary as Collector for the year ..	20 00	980 00	1,573 81
	Durocher, C., salary as Clerk for the year	6 25	493 75	
	Salaries	26 25	1,473 75	
	Contingencies		100 06	
St. John's	Quesnel, J., salary as Collector for the year	18 00	882 00	1,533 66
	Fournier, J. A., salary as Clerk for the year	6 25	493 75	
	Salaries	24 25	1,375 75	
	Contingencies		157 91	
St. Our's Lock	Lebœuf, J., salary as Collector for the year		600 00	621 76
	Contingencies		21 76	
Total, Chambly Canal				3,729 23
<i>Ottawa Canals.</i>				
Carillon Canal	Murphy, D., salary as Collector for the year	14 00	686 00	849 01
	Contingencies		163 01	
Grenville	Pridham, A., salary as Collector for the year	20 00	980 00	1,123 64
	Contingencies		143 64	
St. Anne's Lock	Barrett, J., salary as Collector for the year		999 96	1,544 57
do	Crevier, W., salary as Assistant for the year	6 25	493 75	
	Salaries	6 25	1,493 71	
	Contingencies		50 86	
Total, Ottawa Canals				3,517 22
<i>Rideau Canal.</i>				
Kingston Mills	Deane, J., salary as Collector for the year	5 00	395 00	464 00
	Contingencies		69 00	

APPEUDIX B—*Continued.*No. 1.—DETAILS of Canal Expenditure, 1888-89—*Continued.*

Canals.	Names of Employés.	Deducted for Superannuation.	Amounts Paid.	Total.
		\$ cts.	\$ cts.	\$ cts.
<i>Rideau Canal.</i>				
Ottawa.....	Farley, J. F., salary as Collector for the year.....	24 00	1,176 00	
do	Battle, T., salary as Assistant for the year	16 00	784 00	
	Salaries.....	40 00	1,960 00	
	Contingencies		263 52	
				2,223 52
Smith's Falls.....	Richey, W. M., salary as Collector for the year....	3 75	296 25	
	Contingencies		41 60	
				337 85
	Total, Rideau Canal.....			3,025 37
St. Peter's Canal....	Kavanagh, W. M., salary as Collector for the year.	4 00	196 00	196 00
Newcastle District	Contingencies.....			2 82
Works, Hastings..	Witton, H. B., for the year.....	36 00	1,764 00	
Inspector of Canals..	Contingencies		353 15	
				2,117 15
	Totals.....			36,442 56

APPENDIX B—*Concluded.*No. 1.—DETAILS of Canal Expenditure, 1888–89—*Concluded.*

To whom Paid.	Service.	Amount.	Total.
	<i>General Contingencies.</i>	\$ cts.	\$ cts.
McCarthy, Miss.	Extra services, from 4th June to 4th July, inclusive, at \$400 per annum.	33 97	
do	Extra services, from 9th July to 18th July, inclusive, at \$400 per annum.	10 96	
do	Extra services, from 18th Sept. to 18th Oct., inclusive, at \$400 per annum.	33 33	
do	Extra services, from 14th Dec. to 14th Jan., 1889, inclusive, at \$400 per annum.	33 33	111 59
Hackett, C. A.	Temporary clerk, from 1st Sept., 1888, to 12th Jan., 1889, at \$400 per annum.		146 47
St. Dennis, Miss M. L.	Extra services, 10 days, from 11th to 21st Aug., at \$400 per annum.	10 96	
do	Extra services, 10 days, from 12th to 21st Sept., at \$400 per annum.	10 96	21 92
Weir, J. P.	Extra services, 1 month, from 20th Oct. to 19th Nov., at \$400 per annum.	33 33	
O'Sullivan, Miss M. A.	Extra services, from 12th to 19th Nov., at \$400 per annum.	7 67	
Price, Miss H. M.	do 10 days, from 29th Jan. to 7th Feb., at \$400 per annum.	10 96	
O'Hanly, Miss F.	Extra services, 10 days, from 29th Jan. to 7th Feb., at \$400 per annum.	10 96	
Foley, Ella.	Extra services, 10 days, from 18th to 27th Feb., at \$400 per annum.	10 96	
Pratt, L. G.	23 copies of United States Treasury Counterfeit Detector.	69 00	
Hall, J. C., jr.	Professional services <i>in re</i> H. Bulmer, Canal Lots.	50 00	
Eccles, J. C.	do <i>in re</i> collection of rents on Lot 1, Port Colborne.		7 50
O'Connor, D.	Professional services <i>in re</i> Lease of W. Little.	92 93	
do	Commission on \$4,208.75, amount of Hydraulic Rents collected through him.	420 87	
do	Commission on \$2,079.75, amount of Hydraulic Rents collected through him.	207 97	721 77
			1,202 13
	Grand Total.		37,644 69
	ADD—Printing.	714 24	
	Stationery.	176 18	890 42
	Authorized disbursements (less superannuation).		38,535 11
	ADD—Balances due to Collectors, 1st July, 1888.		1 00
	Actual disbursements agreeing with Statement No. 2, page 171.		38,536 11

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 30th November, 1889.

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Clark, W. B.	Contingencies and salary
Clegg, Wm.	Lessee.
Cockburn, Alex.	do
Collier, H. H.	Contingencies and salary
Collier, R.	Lessee.
Collins, T. & P.	do
Cook, Elisha	Refund.
Conlon, J. & F.	Lessees.
Corporation of County Welland	do
do Montreal	do
do Ottawa	do
do Port Colborne	do
do Town Salaberry	do
do Welland	do
do Thorold	do
do Village of Merritton	do
do Village of Morrisburg	do
Coulter, R.	Contingencies and salary
Crane & Baird	Refund.
Crevier, Auguste	Lessee.
Crevier, W.	Salary
Crowe, J.	Lessee.
Cummings, J.	do
Danis, A. D.	Contingencies and salary
D'Aoust, A.	Lessee.
D'Aoust & Leduc	do
Darling, S.	do
Davey, J., jun.	do
Davis, H. & N.	do
Davis, Wm., & Son	do
Dawson, W.	do
Deane, J.	Contingencies and salary
Delaney, D.	Lessee.
Delisle, Silfrid	do
Demers, J., & Co.	do
Dennie, O. P.	do
Deschamps, J. B.	Salary
Dey Bros.	Lessee.
Dickenson, M. K.	do
Dion, E.	do
Dobbie, Arch.	do
Dobell, Beckett & Co.	do
Dominion Abattoir Co.	do
do Barb Wire Co.	do
do Bridge Co.	do
do Telegraph Co.	do
Donaldson, Andrews & Ross	do
Doran, W. M.	do
Dufresne, O., jun., & Bro.	do
Dubamel, L.	do
Durocher, C.	Salary
Dyer, Cornelius	Purchaser.
Easton, Hiram	Lessee.
Edwardsburg Starch Co.	do
Elliot, Wm.	do
Erie and Lake M. Trans. Co.	Refund.
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Fairgrieve & Son, J. B.	Refund.

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REPORTS

RAILWAY STATISTICS

OF CANADA,

AND CAPITAL, TRAFFIC AND WORKING EXPENDITURE OF
THE RAILWAYS OF THE DOMINION.

1889.

PRINTED BY ORDER OF PARLIAMENT.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1890.

CANADIAN GOVERNMENT RAILWAYS.

OFFICE OF THE CHIEF ENGINEER AND GENERAL MANAGER,

OTTAWA, 26th March, 1890.

SIR,—I have the honor to submit to you the Railway Statistics of the Dominion for the year ended on the 30th June, 1889. Before considering the figures of that year, I introduce a table—which I propose to carry forward in each year's statistics—showing the growth of railway construction and traffic since the opening of the first line in 1837, so far as the information has been placed on record.

Year.	Miles.	Number of Passengers Carried.	Tons of Freight Carried.	Earnings.	Working Expenses.
				\$	\$
1837	16				
1838	16				
1839	16				
1840	16				
1841	16				
1842	16	27,041	7,716	13,650	10,744
1843	16	22,379	7,786	11,850	8,916
1844	16	27,118	12,639	15,254	11,851
1845					
1846					
1847	59				
1848	59				
1849	59				
1850	71				
1851	93				
1852	212				
1853	423				
1854	657				
1855	855				
1856	1,296				
1857	1,428				
1858	1,654				
1859	1,997				
1860	2,087	1,922,227		6,839,409	
1861	2,087				
1862	2,110				
1863	2,110				
1864	2,145				
1865	2,145	2,704,711	2,074,187	11,281,945	7,426,691
1866	2,150	2,920,000	2,260,000	11,496,195	6,575,637
1867	2,258			11,468,277	
1868	2,269			12,116,716	
1869	2,497			12,798,303	
1870	2,497			13,451,289	
1871	2,497			14,485,648	
1872	2,508			15,436,018	
1873	2,638			17,139,876	
1874	2,642			16,286,898	
1875	4,826	5,190,416	5,670,836	19,470,510	15,773,532
1876	5,157	5,544,814	6,331,757	19,358,084	15,802,722
1877	5,574	6,073,233	6,859,796	18,742,053	15,290,091
1878	6,143	6,443,924	7,883,472	20,520,078	16,100,102
1879	6,484	6,523,816	8,348,810	19,925,066	16,188,282
1880	6,891	6,462,948	9,938,858	23,561,447	16,840,705
1881	7,260	6,943,671	12,065,323	27,987,509	20,121,418
1882	7,530	9,352,325	13,575,787	29,027,789	22,390,709
1883	8,726	9,579,948	13,266,255	33,244,586	24,691,667
1884	9,658	9,981,358	13,712,269	33,481,705	25,595,342
1885	10,149	9,672,599	14,659,271	32,227,469	24,015,351
1886	10,697	9,861,024	15,670,460	33,389,382	24,177,582
1887	11,691	10,698,638	16,356,335	38,841,609	27,624,683
1888	12,162	11,416,791	17,172,759	42,159,152	30,652,046
1889	12,628	12,151,105	17,928,626	42,149,615	31,038,045

The tables appended may be summarized as follows:—

Miles of railway completed (track laid).....	13,325
do sidings	1,576
do iron rails in main line.....	786
do steel do	12,539
Capital paid (including the four following items)....	\$760,576,446
Government bonuses paid	\$138,429,306
do loans do	21,201,314
do subscriptions to shares paid.....	300,000
Municipal aid paid	13,461,224
Miles in operation	12,628
Earnings.....	\$ 42,149,615
Working expenses.....	31,038,045
Net earnings.....	11,111,570
Passengers carried.....	12,151,051
Freight carried (tons).....	17,928,626
Train mileage.....	38,819,380
Passengers killed	37
Number of elevators	28
do guarded level crossings.....	122
do unguarded do	7,913
do overhead bridges.....	368
do level crossings of other railways.....	159
do junctions with other railways.....	235
do do branch lines.....	170
do engines owned.....	1,718
do do hired.....	43
do sleeper and parlor cars owned.....	88
do do do hired.....	17
do first-class cars owned.....	763
do do hired	32
do second-class and immigrant cars owned....	564
do do do hired	17
do baggage, mail and express cars owned.....	484
do do do hired....	33
do cattle and box cars owned.....	27,442
do do do hired.....	3,583
do platform cars owned.....	13,599
do do hired	326
do coal and dump cars owned.....	3,235
do do do hired	

NOMINAL CAPITAL PAID.

	Total.	Per Mile.
	\$	\$
Ordinary share capital.....	236,689,181 27	17,734 67
Preference do.....	95,870,491 19	7,184 00
Bonded debt.....	251,675,225 58	18,858 94
Aid from Dominion Government.....	135,894,303 79	10,183 08
do Ontario do.....	5,947,007 52	445 63
do Quebec do.....	9,986,667 41	748 37
do New Brunswick Government.....	4,230,636 00	316 99
do Nova Scotia do.....	1,853,495 87	138 89
do Manitoba do.....	1,981,000 00	148 45
do British Columbia do.....	37,500 00	2 81
do Municipalities.....	13,461,224 43	1,008 48
do Capital from other sources.....	2,949,713 43	221 03
Total.....	760,576,446 49	56,991 34

GOVERNMENT and municipal loans, bonuses, &c., promised to railways completed and under construction :—

Dominion Government.....	\$141,704,278 33
Ontario do.....	5,947,007 52
Quebec do.....	12,380,275 02
New Brunswick Government.....	4,512,165 00
Nova Scotia Government.....	2,091,195 87
Manitoba do.....	2,477,250 00
British Columbia Government.....	37,500 00
Municipalities in Ontario.....	10,209,541 78
do Quebec.....	4,208,274 00
do New Brunswick.....	316,500 00
do Nova Scotia.....	250,000 00
do Manitoba.....	595,600 00
do British Columbia.....	37,500 00
do North-West Territories.....	35,000 00
Total.....	\$184,802,087 52

FATAL ACCIDENTS.

	Passengers Killed.	Employés Killed.	Others Killed.	Total Killed.
Falling from cars or engines.....	3	24	3	30
Getting on or off trains in motion.....	5	9	4	18
At work making up trains.....		5		5
Coupling cars.....		8		8
Collisions and derailments.....	25	16		41
Striking bridges.....	1	1		2
Walking or being on track.....	2	14	74	90
Other causes.....	1	12	3	16
Total.....	37	89	84	210

LAND GRANTS made by Governments to Railways constructed and under construction.

Name of Railway.	Government	Acres Granted.	Acres Sold.	Amount Realized.
Canadian Pacific.....	Dominion...	25,000,000	10,294,582	\$ 20,831,441
Manitoba South-Western Colonization.....	do ..	1,350,400		
Esquimalt and Nanaimo.....				47,608
Great Northern.....	Quebec.....	92,000		
Lower Laurentian.....	do ..	357,000		
Manitoba and North-Western.....	Dominion...	2,918,400	172,846	482,716
North-West Coal and Navigation.....	do ..	420,480	86,638	111,604
Ottawa and Gatineau Valley.....	Quebec.....	450,000		
Qu'Appelle, Long Lake and Saskatchewan.....	Dominion..	140,800	128,000	121,600
Quebec and Lake St. John.....	Quebec.....	1,620,000	1,620,000	1,134,000
Western Counties	Nova Scotia.	150,000		
Wood Mountain and Qu'Appelle.....	Dominion...	1,536,000		

I regret that I must again remark that, while the great trunk lines furnish their returns with commendable promptitude and accuracy, the delay on the part of some of the smaller railways still causes much trouble and embarrassment. Some returns, among which I must mention those of the Kingston and Pembroke and Quebec and Lake St. John Railways, are never furnished until long after the expiry of the time fixed by statute; and the St. Louis and Richibucto, Montreal and Lake Maskinongé, Wood Mountain and Qu'Appelle, and Shore Line have, up to the time of going to press, failed to send in their returns for the year 1889, although repeatedly called upon to do so. I have, therefore, used the returns of these railways for the preceding year, in order to give as fair an account as circumstances will permit of the total railway interest of the Dominion.

I have the honor to be, Sir,

Your obedient servant,

COLLINGWOOD SCHREIBER,

Chief Engineer and General Manager.

A. P. BRADLEY, Esq., Secretary,
Department of Railways and Canals.

TABLE showing Locations of the Railways of the Dominion of Canada, 30th June, 1889.

Name of Railway.	Description.	Distance.	
		Miles.	Total
Albert	Salisbury Station, Intercolonial Railway, to Hopewell and Albert on Chignecto Bay, and Harvey, N. B. . .	47·75	
do Leased	Harvey Branch, Albert to Harvey	3·00	50·75
Albert Southern	Hopewell to Herring Cove, N. B. (10·50 miles of track laid)		17·00
Baie des Chaleurs	Metapedia to Paspebiac (60 miles of track laid, rest under construction)		100·00
Bay of Quinté and Navigation Co. .	Deseronto, on Bay of Quinté, Lake Ontario, to Deseronto Junction, Grand Trunk Railway		3·50
Brantford, Waterloo and Lake Erie	Brantford, Ont., to Waterford, Ont., 16·70 miles (5 miles under construction)		
Buctouche and Moncton	Moncton, on Intercolonial Railway, to Buctouche, N. B. .		32·00
Brockville, Westport and Sault Ste. Marie	Brockville to Westport		45·00
Canada Atlantic	City of Ottawa to Junction with Grand Trunk Railway at Lacolle; located thence to Boundary. Crosses the St. Lawrence at Coteau by Bridge. Connects with Grand Trunk Railway at Coteau and Lacolle		138·40
Canada Southern	Main Line—Windsor to Suspension Bridge	226·18	
	Amherstburg Branch—Essex Centre to Amherstburg. .	15·70	
	St. Clair Branch—St. Clair Junction to Courtright. .	62·63	
	Fort Erie Branch—Fort Erie to Welland Junction. .	17·50	
	Erie and Niagara Branch—Fort Erie to Niagara. .	30·60	
	Oil Springs Branch—Oil Springs to Oil City	5·50	
	Sarnia, Chatham and Erie—Oil City to Petrollea . .	7·00	
	Leamington and St. Clair—Comber to Leamington . .	13·80	
Canadian Pacific : Owned	Main Line, Montreal to Vancouver	2,906·50	378·91
(Formerly North Shore Ry.) . . .	do Quebec to St. Martin's Junction	159·80	
	Branch, Grand Piles to Three Rivers	27·50	
	do Joliette Junction to St. Félix	16·80	
	do Berthier do Berthier	2·00	
	do Ste. Thérèse to St. Lin	15·00	
	do do St. Eustache	8·00	
	do St. Lin Junction to St. Jérôme	11·00	
	do Buckingham Station to Buckingham Village. .	4·20	
	do Hull to Aylmer	7·50	
	do Carleton Junction to Brockville	45·50	
	do Sudbury to Copper Mines	5·00	
	do do Sault Ste. Marie	182·50	
	do Winnipeg Junction to Emerson	64·80	
	do do to Deloraine	201·60	
	do do to Glenboro'	110·20	
	do Rosenfeld to Gretna	13·70	
(Including Manitoba Southwestern Colonization Ry.) . . .	do Winnipeg to W. Selkirk	22·50	
	do do to Stonewall	18·10	
	do Vancouver to Coal Harbor	1·20	
	do New Westminster to N. W. Junction	9·20	
	Total mileage owned	3,832·60	
	Leased lines		
	Atlantic and North-West—Mile End to Mattawamkeag Junction (including former International and Waterloo and Magog Railways)		336·10
	St. Lawrence and Ottawa—		
	Ottawa to Prescott	51·80	
	Chaudière Junction to Ottawa	4·70	
			56·50
	Ontario and Quebec—Montreal to Toronto Junction. .		339·00
	Carried forward		731·60

TABLE showing Locations of the Railways of Canada, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Canadian Pacific— <i>Continued.</i> Leased Lines.	Brought forward.	731·60	
	Credit Valley—		
	Toronto Junction to St. Thomas.	116·10	
	Streetsville Junction to Melville.	31·60	
	Cataract to Elora.	27·50	
		175·20	
	Toronto, Grey and Bruce—		
	Toronto to Owen Sound.	116·60	
	Orangeville to Teeswater.	67·10	
	Glenannan to Wingham.	5·00	
		188·70	
Canadian Government Railways: Intercolonial.	West Ontario Pacific—Woodstock to London.	26·60	
	Guelph Junction—		
	Guelph, Ont., to Guelph Junction, on Credit Valley Railway, C.P.R.	15·50	
	Toronto Junction to Strachan Avenue.	3·20	
	Total Mileage Leased.	1,140·80	
	do Owned.	3,832·60	
	do Worked.		4,973·40
	Main Line—Halifax to Quebec.	678·00	
	Branch—Moncton to St. John.	89·00	
	do Truro to Pictou.	52·00	
Eastern Extension (formerly Halifax and Cape Breton).	do Painsec to Pointe du Chêne.	11·00	
	do St. Charles to Lévis (<i>via</i> Chaudière).	25·00	
	do Dalhousie Junction to Dalhousie.	7·00	
	do Richmond to Dartmouth.	4·00	
	do Derby to Indiantown.	14·00	
	do Stellarton to Pictou.	14·00	894·00
	New Glasgow, on Intercolonial Railway, to Mulgrave, on Strait of Canso.		80·00
	Cape Breton.		98·75
	Oxford to New Glasgow, section of Montreal and European Short Line Railway.		
	Oxford, I.C.R., to Brown's Point, Pictou Town Branch.	67·60	
	Pugwash Junction to Pugwash.	4·75	
Prince Edward Island.			72·35
	Main Line—Alberton to Georgetown.	147·00	
	Branches—Mount Stewart to Souris.	38·40	
	do Alberton to Tignish.	13·10	
Caraquet.	do County Line to Cape Traverse.	12·10	
	(Gauge, 3 ft. 6 in.)		210·60
Carillon and Grenville.	From Gloucester Junction, Intercolonial Railway, 5 miles south of Bathurst Station, easterly along the south shore of Baie des Chaleurs to Shippegan Harbour, N.B.		68·00
	Carillon to Grenville, P.Q., connecting at both termini with Ottawa River Navigation Company's steamers (Gauge, 5 ft. 6 in.)		13·00
Central Ontario.	From Picton, in Prince Edward County, Ont., to Coe Hill Iron Mines, Wollaston, County of Hastings; connects with Grand Trunk at Trenton, Midland Railway, 2 miles west of Stirling, and with Ontario and Quebec, in Township of Rawdon.		104·00
Central Railway of New Brunswick.	From Norton Station, on the Intercolonial Railway, to Salmon River (38·66 miles of track laid, rest under construction).	44·66	
	From Hampton to Onaco (formerly St. Martin's and Upham Railway).	30·00	
			74·66

TABLE showing Locations of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Chatham Branch.....	Town of Chatham, N.B., to Chatham Junction with Intercolonial Railway, and connecting with Northern and Western Railway.....		11 00
Cobourg, Blairton and Marmora.....	Town of Cobourg to Harwood.....	15 00	
	Blairton to Canadian Pacific Railway.....	3 00	18 00
Cornwallis Valley.....	From Kingsport, on Basin of Minas, N.S., to Kentville on Windsor and Annapolis Railway, 14 miles (under construction).....		
Cumberland Railway and Coal Company (formerly Spring Hill and Parrsboro').....	Spring Hill Junction, Intercolonial Railway, to Spring Hill Coal Mines, N.S., and Parrsboro', on the Bay of Fundy.....		32 00
	Spring Hill and Oxford Branch, from Spring Hill Mines to Oxford Village on the Oxford and New Glasgow Railway, 14 miles (under construction).....		
Drummond County.....	Drummondville, P.Q., to Mitchell, connects with Canadian Pacific Railway at Drummondville.....		13 00
Dominion Lime Co.'s Railway....	Dudswell Junction, Quebec Central Railway, and Lime Quarries.....		4 80
Elgin, Petitoctiac and Havelock.....	From Elgin, County of Albert, N.B., to Petitoctiac Junction, with Intercolonial Railway; thence to Havelock, in County of King's.....		26 50
Erie and Huron.....	Rondeau, Lake Erie, Ont., to Wallaceburg, passing through Town of Chatham, Ont.; connects with Canada Southern and Great Western Railways.....		73 12
Esquimault and Nanaimo.....	Russell's Station to Wellington Mines.....		78 00
Fredericton and St. Mary's Railway Bridge Co.....	Connecting the Fredericton Railway, at Fredericton, with the Northern and Western Railway at St. Mary's.....		1 33
Grand Trunk— Grand Trunk Division owned..	Main Line—Port Edward to Point Lévis and Island Pond.....	727 25	
	Sarnia Extension—Port Edward to Great Western... Branch—Montreal to Wharves.....	3 00 2 00	
	Three Rivers Branch—Arthabaska to Doucet's Landing.....	35 25	
	Kingston Branch—Main Line to Kingston.....	2 25	
	Galt and Waterloo Branch—Waterloo and Berlin to Galt.....	14 50	
	London Branch—St. Mary's to London.....	22 00	
	Champlain Branch—St. Lambert to Rouse's Point, Montreal to Lachine, St. Isidore to Province Line..	73 25	
	Jacques Cartier Union—Jacques Cartier to Canadian Pacific Railway Junction.....	6 50	
	Northern Railway— Main Line—Toronto to Gravenhurst.....	111 49	
	Branch—Allandale to Collingwood.....	31 76	
	do Collingwood to Meaford.....	20 50	
	do Flos Tramway—Elmvale to Hillsdale.....	8 28	
	Hamilton and North-Western— Main Line—Port Dover, on Lake Erie, to Allandale, on Lake Huron.....	134 07	
	Branch—Beeton to Collingwood.....	39 83	
Great Western Division..	Main Line—Niagara Falls to Windsor.....	229 50	
	Toronto Branch—Hamilton to Toronto.....	38 50	
	Galt do Harrisburg to Guelph.....	28 98	
	Brant do do Brantford.....	8 00	
	Sarnia do Komoka to Sarnia.....	50 75	
	Petrollea do Wyoming to Petrollea.....	4 75	
	Loop Line—Fort Erie to Glencoe.....	145 50	
	Carried forward.....	1,738 01	

TABLE showing Locations of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
	Brought forward.....	1,738·01	
Grand Trunk— <i>Continued.</i>			
Great Western Division..	Allanburg Branch—Allanburg to Clifton Junction....	8·32	
	Welland—From Port Colborne to Port Dalhousie, Ont.	25·00	
Leased and Operated.....	Wellington, Grey and Bruce—Guelph to Southampton and Palmerston to Kincardine.....	168·35	
	London and Port Stanley—London to Port Stanley...	23·66	
	London, Huron and Bruce—Hyde Park to Wingham Junction.....	68·89	
	Brantford, Norfolk and Port Burwell—Brantford to Tilsonburg Junction.....	34·75	
	NOTE.—The Georgian Bay and Lake Erie Railway includes the former Georgian Bay and Wellington, Port Dover and Lake Huron, and Stratford and Huron Railways.		
	Buffalo and Lake Huron—Goderich to Fort Erie.....	162·00	
	Georgian Bay and Lake Erie—Port Dover to Wiarton	172·75	
	South Norfolk—Simcoe to Port Rowan.....	17·00	
	Montreal and Champlain Junction—Brosseau to Dundee and St. Martins to Valleyfield.....	81·25	
	Northern and Pacific Junction (from Northern Railway at Gravenhurst to Junction with Canadian Pacific Railway at La Vase River, Lake Nipissing).	111·37	
	North Simcoe—Colwell to Penetanguishene.....	33·34	
Leased—Midland Division.....	Midland—Port Hope to Peterboro' and Midland on Georgian Bay.....	161·81	
	Toronto and Nipissing (including former Lake Simcoe Junction Railway).....	111·50	
	Grand Junction—From Belleville to North Hastings and Peterboro'.....	87·75	
	Whitby and Haliburton (including former Victoria, and Whitby, Port Perry and Lindsay Railways)....	99·75	
	Madoc Junction to Bridgevater.....	8·50	
			3114·00
Great Eastern.....	From Dundas, County Huntington, Que., to Lévis, Que. (under construction, 60 miles).....	220·00	
	Branch from St. Lambert's to Rouse's Point (6·12 miles track laid).....	36·00	
			256·00
Great Northern.....	From near St. Andrew's, on Ottawa River, to Quebec; 8 miles constructed from St. Jérôme to New Glasgow		170·00
Great North-West Central.....	Brandon, <i>via</i> Battleford, to Rocky Mountains (50 miles under construction).....		
Irondale, Bancroft and Ottawa...	From Orillia, Ont., to Ottawa (located from Mackinmount to Bancroft, 50 miles). Will connect with G. T. R. and Northern Railways at Orillia. Also with Kingston and Pembroke and with C.P.R. at Ottawa. 10 miles of track laid.....		225·00
Joggins.....	Maccan Station, I. C. R., to Prospect Mine.....		13·00
Kent Northern.....	Richibucto, N. B., to Intercolonial Railway.....		27·00
Kingston and Pembroke.....	Main Line—Kingston to Pembroke.....	103·00	
	Glendon Branch—Bedford to Zanesville.....	4·00	
	do To Robertsville Mines.....	1·00	
	do To Doran's Mills, Charcoal Works, McLaren's Mills, Bethuen's Mines, Lavant Mills, Clyde Forks Mills and Francis Mills.....	4·00	
			112·00
	(Connects with Grand Trunk at Kingston, Canadian Pacific at Sharbot Lake and at Renfrew).....		
L'Assomption.....	L'Epiphanie Station, C. P. R., to L'Assomption.....		3·50
Lake Erie, Essex and Detroit River.....	From Walkerville, Ont., on G.T.R., to Leamington on Canada Southern Railway.....		38·00
Lake Temiskaming Colonization Railway.....	Mattawa to head of Lake Kippewa.....		15·2

TABLE showing Locations of Railways, &c.—*Continued.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
Lower Laurentian (formerly St. Lawrence, Lower Laurentian and Saguenay).....	From St. Tite, on C. P. R., to Rivière à Pierre, on Quebec and Lake St. John Railway (22 miles of track laid).....		42·75
Manitoba and North-Western...	Portage la Prairie to Langenburg.....	180·57	
	Shell River Branch.....	11·45	
	Leased—Saskatchewan and Western—Minnedosa to Rapid City (under construction from Langenburg to Saltcoats 25·32 miles).....	15·47	207·49
Massawippi Valley.....	From Lennoxville to Vermont Boundary, there connecting with Connecticut and Passumpsic Rivers Railway. Also connects with Grand Trunk and C.P.R. at Lennoxville.....	32·00	
	Branch—Stanstead Junction to Stanstead.....	2·00	34·00
Montreal and Sorel..	From Junction with Grand Trunk at St. Lambert to Armstrong, on Richelieu River, opposite to Sorel.....		44·67
Montreal and Lake Maskinongé..	From St. Félix to St. Gabriel de Brandon, Que.....		12·75
Montreal and Vermont Junction.	From Junction with Stanstead, Shefford and Chambly Railway, 2½ miles east of St. John, P. Q., to Junction with Vermont and Canada Railway, at Vermont Boundary. Also connects at Stanbridge with Lake Champlain and St. Lawrence Junction Railway.....		23·60
Napanee, Tamworth and Quebec.	From Junction with Grand Trunk Railway at Town of Napanee, Ont., to Village of Tamworth.....		28·50
New Brunswick.....	From Gibson (opposite Fredericton on St. John River) N. B., to Edmundston.....	164·00	
	Branch—Newbury Junction to Woodstock.....	6·00	
	do Aroostock to Maine Boundary.....	4·00	
	Leased Lines—		174·00
	New Brunswick and Canada—Woodstock to St. Stephen and St. Andrew.....	127·00	
New Brunswick and Prince Edward Island.....	St. John and Maine—Carleton to St. Croix and Vanceboro'.....	92·00	
	Fredericton—Fredericton Junction to City of Fredericton.....	22·50	
	From Sackville Station, Intercolonial Railway, to Cape Tormentine.....		241·50
Northern and Western of New Brunswick.....			36·00
	From Gibson (opposite City of Fredericton) to Chatham Junction—Intercolonial Railway.....	107·00	
	Blackville to Indiantown.....	9·00	116·00
North-Western Coal and Navigation.....	(Connects also with New Brunswick Railway at Gibson.)		
	From Junction with Canadian Pacific Railway at Dunmore, 651 miles west of Winnipeg, in a westerly direction to the Colliery at Lethbridge, in the District of Alberta, gauge 3 feet.....		109·50
Northern Pacific and Manitoba..	Winnipeg to International boundary.....	65·30	
	Portage Junction to Portage la Prairie.....	52·50	
	Morris to Brandon.....	145·50	263·30
Nosbonsing and Nipissing.....	(112 miles of track laid.)		
Nova Scotia Central	From Nosbonsing, on Canadian Pacific Railway, to Lake Nipissing.....		5·50
	From Middleton, on the Windsor and Annapolis Railway, to town of Lunenburg, on the Atlantic Coast, N.S.—34 miles of track laid.....		75·00

TABLE showing Locations of Railways, &c.—*Continued.*

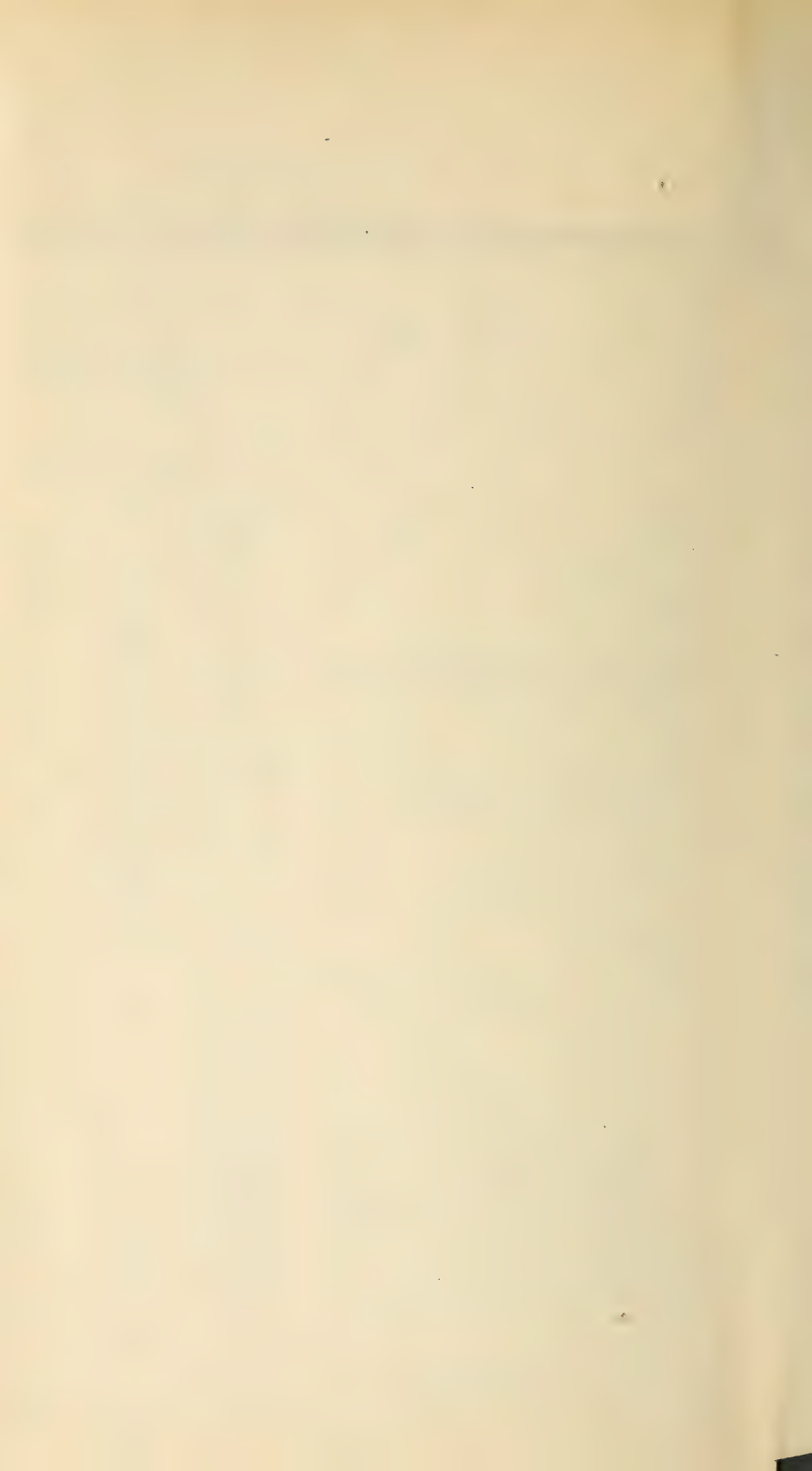
Name of Railway.	Description.	Distance.	
		Miles.	Total.
Ottawa and Gatineau Valley	Canadian Pacific Railway Station at Hull, Que., to Wakefield..... (3 miles graded.)		19 50
Pontiac and Renfrew	From Wyman's Station, on Pontiac Pacific Junction Railway, to Bristol Mines, County Pontiac, Que....		4 25
Pontiac Pacific Junction	From Junction with Canadian Pacific Railway at Aylmer, Que., to Pembroke, Ont. (Rails laid on 71 miles only from Aylmer.)		85 00
Qu'Appelle, Long Lake and Saskatchewan.....	From Canadian Pacific Railway at Regina, north-westerly to Long Lake.....		23 00
Quebec and Lake St. John	Quebec to Lake St. John..... Chambord to Chicoutimi.....	190 00 5 00	195 00
	Junction with North Shore Railway 4 miles from Quebec to Roberval, Lake St. John, 195 miles completed, 177 miles under traffic.		
	Branches not built— St. Gabriel to Rivière aux Pins..... Lake Edward to La Tuque.. .. Lake St. John to Chicoutimi.....	10 00 30 00 70 00	110 00
Quebec Central	Main Line—Sherbrooke to Harlaka Junction, Intercolonial Railway, 5 miles from Lévis, Que. Chaudière Branch—Beauce Junction to St. Francis... Angus Branch—East Angus to Angus Mills..... (Also 40 miles under construction.) (Also connects with Grand Trunk, Passumpsic and C.P.R. at Sherbrooke.)	138 00 15 00 1 00	154 00
Quebec, Montmorenci and Charlevoix	Hedleyville, Parish of St. Roch, Quebec, to St. Anne.....		21 00
Stanstead, Shefford and Chambly	From Junction with Montreal and Vermont Junction Railway, near St. John, Que., easterly to Waterloo. (Connects with South-Eastern, and Champlain and St. Lawrence Junction Railways).		43 00
Shore Line (formerly Grand Southern).....	St. John to St. Stephen, N.B.		82 50
Stewiacke Valley and Lansdowne	Graham's Siding, Intercolonial Railway, to Upper Stewiacke, thence to Lansdowne (12 miles under construction).....		37 00
South-Eastern	Main Line—West Farnham to Boundary Line..... Northern Division—Sutton Junction to Sorel..... Branch—Drummondville to L'Avenir.....	44 00 96 00 12 00	
	Leased Lines— Montreal, Portland and Boston—Longueuil and St. Lambert to Farnham..... Branch—Marieville to St. Césaire..... Lake Champlain and St. Lawrence Junction—Stanbridge to St. Guillaume.....	36 00 9 00 63 00	260 00
	(Connects with Connecticut and Passumpsic Railway, Grand Trunk, and Stanstead, Shefford and Chambly).		
St. Catharines and Niagara Central	St. Catharines, Ont., to Niagara Falls.....		12 35
St. John Bridge and Railway Extension.....	Lies within the limits of the City of Portland, N.B., and connects the Intercolonial and New Brunswick Railways		1 75
St. John Valley and Rivière-du-Loup.....	From Fredericton, N.B., to Woodstock, N.B. (3 miles graded).....		

TABLE showing Locations of Railways, &c.—*Concluded.*

Name of Railway.	Description.	Distance.	
		Miles.	Total.
St. Louis, Richibucto and Buctouche.....	Richibucto to Buctouche—(Completed from Richibucto to St. Louis, 7 miles).....		
Thousand Islands.....	Gananoque to Gananoque Station, G.T.R.....		3 15
Témiscouata.....	Rivière du Loup, Que., on Intercolonial, to Edmundston, N.B., on the New Brunswick Railway.....		81 20
Western Counties.....	Yarmouth to Digby, N.B.....		67 00
Windsor and Annapolis.....	Windsor to Annapolis, N.S.....	84 00	
Leased Line.....	Windsor Branch—Windsor to Windsor Junction, Intercolonial Railway, 14 miles from Halifax.....	32 00	
Wood Mountain and Qu'Appelle.	From Canadian Pacific Railway, near Qu'Appelle Station to Fort Qu'Appelle, thence north-westerly (17 miles under construction).....		116 00
Winnipeg and Hudson Bay	Winnipeg to Port Nelson on Hudson Bay.....		110 00
	(Constructed 40 miles, Winnipeg to St. Laurent on Lake Manitoba.)		650 00

No. 1.--Summary Statement of Capital for the Year ended 30th June, 1889.

Number.	NAME OF RAILWAY.	LENGTH OF LINE.		ORDINARY SHARE CAPITAL.			PREFERENCE SHARE CAPITAL.			BONDED DEBT.			GOVERNMENT AID.				MUNICIPAL AID.				CAPITAL FROM OTHER SOURCES.			TOTAL CAPITAL.		FLOATING DEBT.		Total Cost of Rail- way and Rolling Stock.	Number.	REMARKS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		Completed. (Rails laid.)	Under Construction.	Authorized.	Subscribed.	Paid Up.	Authorized.	Subscribed.	Paid Up.	Authorized.	Paid Up.	Rate of Interest.	Name of Government.	Loan.	Bonus.	Subscription Shares or Bonds.	Paid Up.	Loan.	Bonus.	Subscription to Shares or Bonds.	Paid Up.	Subscribed.	Paid Up.	Subscribed.	Paid Up.	Amount.	Rate of Interest.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1	Albert Harvey Branch	47 75	50 75	1,000,000 00	639,500 00	639,500 00				600,000 00	599,573 33	6	Dominion N. Brunswick	8,296,665 45	15,000 00	469,665 45	484,381 01			76,000 00		76,000 00			1,214,665 00	1,813,454 34	10,478 36	1,784,673 33	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
2	Albert Southern	3 00	10 50	60,000 00	49,500 00	32,500 00				140,000 00	40,000 00	6	Dominion N. Brunswick	3,000 00		18,000 00	14,534 60					68,100 00		47,034 00			30,410 97	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
3	Bas des Chaleurs		60 00	3,000,000 00	300,000 00	300,000 00				1,000,000 00	1,000,000 00	6	Dominion N. Brunswick	3,000 00		103,700 00	56,000 00					233,700 00		130,420 00			70,000 00	3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
4	Bay of Quinte and Navigation Co.		2 30	20,000 00	15,000 00	75,000 00				10,500 00		Nominal	Dominion			102,000 00	45,000 00		5,000 00		105,000 00		5,000 00			165,000 00	90,000 00	75,138 70	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
5	Beckville, Westport and St. Marys		45 00	1,125,000 00	100,000 00	100,000 00				200,000 00	1,300 00		Dominion			67,000 00	110,000 00		50,000 00		110,000 00		7,000 00	3,400 00			23,400 00	51,400 00	5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
6	Brantford, Watford and Lake Erie		5 00	20,000 00	106,700 00	16,700 00				30,000 00	310,000 00	6	Dominion N. Brunswick	802,400 00		188,100 00	155,554 00					418,400 00		715,554 00		50,000 42	7	7	81,389 85	6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
7	Buckeye and Milton		32 00	30,000 00	230,000 00	230,000 00				4,000,000 00			Dominion N. Brunswick	30,000 00		372,333 00					3,040,000 00		3,372,333 00						8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
8	Canada Atlantic		138 40	2,000,000 00	2,000,000 00	2,000,000 00	1,000,000 00	1,000,000 00	1,000,000 00	20,000,000 00	19,023,600 69	5	Dominion			147,838 05	31,200 00		322,500 00		322,500 00					15,470,338 05	34,493,959 24			9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
9	Canada Southern	365 11	378 91	15,000,000 00	13,000,000 00	13,000,000 00							Dominion			65,542,987 33	46,542,987 33					46,542,987 33		46,542,987 33				46,542,987 33			10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
10	Canadian Government Railways	13 80	80 00										Dominion	81,318,731 49		1,962,276 49	1,962,276 49					1,962,276 49		1,962,276 49				1,962,276 49			11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Eastern Extension		210 00										Dominion	643,545 00		3,741,780 89	3,741,780 89					3,741,780 89		3,741,780 89				3,741,780 89			12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Prince Edward Island		28 75										Dominion			1,849,228 99	1,849,228 99					1,849,228 99		1,849,228 99				1,849,228 99			13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Cape Breton		72 33										Dominion			1,281,254 97	1,281,254 97					1,281,254 97		1,281,254 97				1,281,254 97			14																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
11	Canadah Pacific	3,415 30	4,978 40	65,000,000 00	65,000,000 00	65,000,000 00				60,977,333 33		5 & 3	Dominion Ontario	836,067,063 71		58,214,463 71	58,214,463 71			407,500 00	42,500 00	150,000 00		123,004,663 71	193,641,797 04			106,641,797 04	11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	



SUMMARY STATEMENTS.

No. 2.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
							Lbs.	Lbs.
1	Albert.....47·75)	50·75		44·50	6·25	1·00	56	56
	Harvey Branch.....3·00)							
2	Albert Southern.....	10·50	6·50		10·50			56
3	Baie des Chaleurs.....	60·00	40·00		60·00	6·00		56
4	Bay of Quinté and Navigation Co.....	3·50			3·50	3·00		50
5	Brockville, Westport & Sault Ste. Marie.....	45·00			45·00	1·50		56
6	Brantford, Waterloo and Lake Erie.....		5·00					
7	Buctouche and Moncton.....	32·00			32·00	3·25		56
8	Canada Atlantic.....	138·40			138·40	20·00		56
9	Canada Southern.....365·11)							
	Leamington and St. Clair...13·80)	378·91		34·76	344·15	134·09		60 65 80
10	Canadian Government Railways—							
	Intercolonial.....	891·00			891·00	133·25		56 57½ 67
	Prince Edward Island.....	210·60		136·91	73·69	15·68	40	50 & 52
	Eastern Extension.....	80·00			80·00	4·75		56
	Cape Breton.....	98·75			98·75			56
	Oxford and New Glasgow.....	72·35			72·35			56
11	Canadian Pacific.....3415·30)							
	Atlantic and North-West....336·10							
	Manitoba South-Western Col- onization.....211·20							
	North Shore.....206·10							
	St. Lawrence and Ottawa...56·50							
	Toronto, Grey and Bruce....188·70	4973·40		58·00	4915·40	450·90	56 to 72	45 & 56
	Ontario and Quebec.....339·00							
	Credit Valley.....175·20							
	West Ontario Pacific.....26·60							
	Guelph Junction.....15·50							
	Toronto Junction to Strachan Avenue.....3·20)							
12	Caraquet.....	68·00			68·00			50
13	Carillon and Grenville.....	13·00		13·00			65	
14	Central Ontario.....	104·00			104·00	11·00		42 & 56
15	Central of New Brunswick.....	68·00	6·66		68·00	2·00		54
16	Chatham Branch.....	11·00			11·00	1·00		56½ & 60
17	Cornwallis Valley.....		14·00					
18	Cumberland Railway and Coal Co.....	32·00	14·00		32·00	10·00		56 & 67
19	Dominion Lime Co.....	4·80			4·80	1·00		56
20	Drummond County.....	14·50		1·50	13·00		44	56
21	Elgin, Petitediac and Havelock.....	27·75		7·00	20·75	1·00	60	50 54 56 60
22	Erie and Huron.....	73·12			73·12	5·33		54 & 56
23	Esquimalt and Nanaimo.....	78·00			78·00	2·03		50 & 54
24	Fredericton and St. Mary's Railway Bridge Co.....	1·33			1·33	11		60
25	Grand Trunk.....879·59)							
	Buffalo and Lake Huron.....162·00)							
	Grand Trunk, Georgian Bay and Lake Erie.....172·75							
	South Norfolk.....17·00							
	Montreal and Champlain Jn. 81·25							
	Great Western.....537·72							
	London and Port Stanley....23·84							
	Wellington, Grey and Bruce.168·09							
	London, Huron and Bruce...68·89							
	Carried forward.....	7,540·66	86·16	295·67	7,244·99	806·89		

Roads, &c., Year ended 30th June, 1889.

Number of Ties to Mile.	Nature of Rail Fastenings	No. of Grain Elevators.		No. of Level crossings	No. of Overhead Bridges.	Height of Overhead Bridges above Rail Level.	Level Crossings of other Railways.	No. of Junctions with other Railways.	No. of Junctions with Branch Lines.	Radius of Sharpest Curve.	No. of Feet per Mile of heaviest Gradient.	Gauge of Railway.	Number.
		Guarded.	Not Guarded.										
						Feet.							
2200	Chairs and plates.....		20	1	40		2	1			70	4' 8½	1
2640	Fishplates.....		7				2		955		120	4' 8½	2
2600	do.....			1	22		1				67	4' 8½	3
3000	do.....		11				1		400		90	4' 8½	4
2640	Fisher Bridge Joint.....		35				2		717		58	4' 8½	5
2600	do.....		16	1	20		1		1719		40	4' 8½	6
2640	Fishplates.....		18				1		955		73	4' 8½	7
2816	do.....	6	86	3	22	6	4		2865		40	4' 8½	8
2800	do.....	3	3	371	16	19	14	14	5	913	75	4' 8½	9
2640	Angle and fishplates.....	1	9	429	29	18½-35	6	22	17	694	65	4' 8½	10
2640	do.....		956	2	17½					396	90	3' 6	
2640	Fishplates.....		60	9	20		1		955		79½	4' 8½	
2640	do.....								955		78	4' 8½	
2640	do.....										52' 80	4' 8½	
2640	Angle bars and fishplates.....	6	17	1975	54	20-22' 10	30	37	35	500	*237' 6	4' 8½	11
2600	Fishplates.....						1		1000		60	4' 8½	12
1760	Chairs.....	1	8	1	17				1910		100	5' 6	13
2640	Fishplates and bolts.....		94				3		955		107	4' 8½	14
2640	Fishplates.....	5	23				2		955		66	4' 8½	15
2640	do.....		5					2	955		52' 80	4' 8½	16
													17
2600	Fishplates and bolts.....		13				1		620		160	4' 8½	18
2680	Fishplates.....		6				2		955		80	4' 8½	19
2640	do.....		9				1	1	717		63	4' 8½	20
2640	Chairs and fishplates.....		19				1	1	717		80	4' 8½	21
2816	Fishplates.....		108			4	4		661		52	4' 8½	22
2992	Angle fishplates and bolts.....		15	2	23				573		80	4' 8½	23
2564	do.....						3				50	4' 8½	24
10		41	4284	119			65	106	62				

* Temporary.

No. 2.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
	Brought forward ...2,113·13	7540·66	86·16	295·67	7244·99	806·89	Lbs.	Lbs.
	Brantford, Norfolk and Port Burwell.....	34·73						
	Midland.....	165·75	3114·00	250·50	2863·50	579·50	56	56 65 66 72 78
	Toronto and Nipissing.....	111·50						
	Grand Junction.....	85·40						
	Whitby, Port Perry and Lind- say.....	46·50						
	Victoria, Lindsay & Halibur- ton.....	53·25						
	Northern.....	205·37						
	Northern & Pacific Junction.....	111·37						
	Hamilton and North-Western.....	173·90						
	Madoc Junction and Bridge- water.....	8·60						
	Jacques Cartier Union.....	6·50						
26	Great Eastern.....	6·50	60·00		6·50			56
27	Great Northern.....	7·84			7·84			56
28	Great North-West Central.....		50·00					
29	Hereford.....	35·35	13·00		35·35	1·65		56
30	Irondale, Bancroft and Ottawa.....	10·00	40·00		10·00	25		56
31	Joggins.....	13·00			13·00	1·50		56
32	Kent Northern.....	27·00		3·50	23·50			
33	Kingston and Pembroke.....	112·75		9·75	103·00	21·00	50 to 84	56
34	L'Assomption.....	3·00			3·00	25		56
35	Lake Erie, Essex and Detroit.....	38·00			38·00	3·04		56
36	Lake Temiscaming Colonization and Railway Co.....	15·20			15·20			16 & 30
37	Lower Laurentian.....	22·00			22·00	1·50		56
38	Manitoba and North-Western.....	217·24						
	Saskatchewan and Western.....	15·47	232·71		232·71	19·23		56
39	Massawippi Valley.....	34·00			34·00			50
40	Montreal and Western.....		30·00					
41	Montreal and Sorel.....	44·67			44·67	3·33		56
42	*Montreal and Lake Maskinongé.....	10·00			10·00			
43	Montreal and Vermont Junction.....	23·60			23·60	2·00		60
44	Napanee, Tamworth and Quebec.....	28·50	27·00		28·50	2·00		56
45	New Brunswick.....	174·00						
	New Brunswick and Canada.....	127·00	415·50		415·50	36·50		56 & 70
	St. John and Maine.....	92·00						
	Fredericton.....	22·50						
46	New Brunswick and P. E. Island.....	36·00			36·00	1·50		56
47	Northern & Western of New Brunswick.....	116·00			116·00	5·00		56½ & 61
48	Northern Pacific and Manitoba.....	112·00			112·00	7·00		56
49	North-Western Coal and Navigation Co.....	109·50			109·50	4·70		28 & 30
50	Nova Scotia Central.....	34·00	40·00		34·00	1·00		56
51	Nosbonsing and Nipissing.....	5·50			5·50	1·25		56
52	Ottawa and Gatineau Valley.....		3·00					
53	Pontiac and Renfrew.....	4·25			4·25			56
54	Pontiac Pacific Junction.....	71·00	15·00		71·00	2·00		56
55	Qu'Appelle, Long Lake & Saskatchewan.....	22·00			22·00			56
56	Quebec and Lake St. John.....	191·00			191·00	10·00		56
57	Quebec Central.....	154·00		2·50	151·50	11·00		56
58	Quebec, Montmorency and Charlevoix.....	20·50			20·50	1·50		56
59	Stanstead, Shefford and Chambly.....	43·00		29·00	14·00	5·50	60	60
	Carried forward.....	12653·03	364·16	590·92	12062·11	1529·09		

* Return of 1888.

Roads, &c., Year ended 30th June, 1889—Continued.

Number of Ties to Mile.	Nature of Rail Fastenings.	No. of Grain Elevators.	No. of Level crossings		No. of Overhead Bridges.	Height of Overhead Bridges above Rail Level.	Level Crossings of other Railways.	No. of Junctions with other Railways.	No. of Junctions with Branch Lines.	Radius of Sharpest Curve.	No. of Feet per Mile of heaviest Gradient.	Gauge of Railway.	Number.	
			Guarded.	Not Guarded.										
		10	41	4284	119	Feet.	65	106	62					
2640	Angle bars and fishplates.....	12	74	2493	222	15'6-28'4	62	57	78	1100	105	4'8½	25	
	Fishplates			5			1	1		1910	26	4'8½	26	
2640	do							1		1273	52	80	4'8½	27
													28	
2600	do			15				2		955	66	4'8½	29	
2640	do			3				1		1000	60	4'8½	30	
3000	do			4			1	1	2	958	79	4'8½	31	
	do			5				2	1	1000	60	4'8½	32	
2640	Fishplates			54	4	16½-21½	4	4	13	955	79	4'8½	33	
2500	do			1				1			20	4'8½	34	
2600	Angle bars.....			43	1	19'6	4	4		1433	60	4'8½	35	
2600												3'0	36	
2600				7				1		717	82	4'8½	37	
2700	Angle bars.....	6		160				1	2	955	105	4'8½	38	
2800	Fishplates			20	1	19	1			955	76	4'8½	39	
													40	
2640	Fishplates			12			1	2		2292	53	4'8½	41	
													42	
2640	Fishplates			51	1	17½		2			52	4'8½	43	
3000	Angle iron fishplates.....			24			1	1		882	88	4'8½	44	
2640	Fishplates		1	157	3	18	1	5	5	540	85	4'8½	45	
2400	do			26				1		1000	66	4'8½	46	
2640	Fishplates and angle plates.....		1	25			1	5	1	955	80	4'8½	47	
2640	Fishplates and angle bars.....		3				3			955	26	4'8½	48	
2112	Fishplates			4				1		1433	52	3'0	49	
2640	Angle plates.....			21	1	21		1		882	80	4'8½	50	
2600	Fishplates			1			1				132	4'8½	51	
													52	
													53	
2640	Angle fishplates							1		1433	52	80	4'8½	54
2500	Fishplates							1		1433	52	80	4'8½	55
2640	do			26	3			2		716	132	4'8½	56	
2640	do			26			1	5	1	882	76	4'8½	57	
2640	Plain steel plate with 4 bolts.....			6	1	22				1433	52	80	4'8½	58
2400	Fishplates and bolts			42			3	4			60	4'8½	59	
		28	120	7515	356		150	213	165					

No. 2.—SUMMARY STATEMENT of Characteristics of

Number.	Name of Railway.	Length of Line.				Length of Siding.	Weight per Yard.	
		Completed. (Rails laid.)	Under Construc- tion.	Iron Rails.	Steel Rails.		Iron Rails.	Steel Rails.
							Lbs.	Lbs.
	Brought forward.....	12653·03	364·16	590·92	12062·11	1529·09		
60	† Shore Line	82·50			82·50	2·00		50
61	South Eastern—							
	Montreal, Portland and Boston.....	260·00		100·50	159·50	29·00	60	57½ & 60
	Lake Champlain and St. Lawrence Junction							
62	St. Catharines and Niagara Central.....	12·35			12·35	·55		56
63	St. John Bridge and Railway Extension	1·75			1·75			60
64	St. John Valley and Rivière du Loup.....		3·00					
65	*St. Louis, Richibucto and Buctouche..	7·00			7·00			
66	Stewiacke Valley and Lansdowne.....		12·00					
67	Temiscouata.....	81·00			81·00	4·00		56
68	Thousand Islands.....	4·08			4·08	1·00		56
69	Western Counties.....	67·00	20·00	65·00	2·00	4·00	56	56
70	Windsor and Annapolis..... 84·00	116·00		29·25	86·75	4·50	50 & 67	56
	Windsor Branch..... 32·00							
71	Winnipeg and Hudson Bay	40·00			40·00	2·00		56
72	*Wood Mountain and Qu'Appelle.....		17·00					
	Total.....	13324·71	416·16	785·67	12539·04	1576·14		

† Late Grand Southern ; return of 1888.

* Return of 1888.

Roads, &c., Year ended 30th June, 1889—*Concluded.*

Number of Ties to Mile.	Nature of Rail Fastenings.	No. of Grain Elevators.		No. of Level crossings	No. of Overhead Bridges.	Height of Overhead Bridges above Rail Level.	Level Crossings of other Railways.	No. of Junctions with other Railways.	No. of Junctions with Branch Lines.	Radius of Sharpest Curve.	No. of Feet per Mile of heaviest Gradient.	Gauge of Railway.	Number.
		Guarded.	Not Guarded.										
		28	120	7515	356	Feet.	150	213	165				
2464	Suspended joint fishplates.		52				1	3		716	79 4	8½	60
3000	Fishplates	1	229	1	20·6	7	11	5	637	80 4	8½	61	
2500	do		17	10	22	1	1		717	79 4	8½	62	
		1	3				2				4 8½	63	
												64	
												65	
												66	
2640	Fishplates		14				2		955	79 4	8½	67	
3000	Angle plates.		8				1		660	84 4	8½	68	
2600	Fishplates								600	84 4	8½	69	
2640	do		69	1	32		1		693	75½	4 8½	70	
2640	do		6				1				4 8½	71	
												72	
		28	122	7913	368		159	235	170				

No. 3.—SUMMARY STATEMENT of the different descriptions of

Number.	Name of Railway.	Length of Line.		Number of Engines.		Number of Sleeping Cars.		Number of Palace or Drawing Room Cars.	
		Com- pleted.	Under Con- struc- tion.	Ow- ned.	Hired.	Ow- ned.	Hired.	Ow- ned.	Hired.
1	Albert	47 75		3					
	Harvey Branch	3 00							
2	Albert Southern	10 50	6 50	1					
3	Baie des Chaleurs	60 00	40 00	2	1				
4	Bay of Quinté and Navigation Co	3 50		3					
5	Brockville, Westport and Sault Ste. Marie	45 00		2					
6	Brantford, Waterloo and Lake Erie		5 00						
7	Buctouche and Moncton	32 00		2					
8	Canada Atlantic	138 40		11	9				
9	Canada Southern	365 11							
	Leamington and St. Clair	13 80		130					
10	Canadian Government Railways								
	Intercolonial	891 00		176		17		in fore-	
	Prince Edward Island	210 60		21				going.	
	Eastern Extension	80 00		9					
	Cape Breton	98 75		8					
	Oxford and New Glasgow	72 35		9					
11	Canadian Pacific	3,415 30							
	Atlantic and North-West	336 10							
	Manitoba South-Western Colonization	211 20							
	North Shore	206 10							
	St. Lawrence and Ottawa	56 50							
	Toronto, Grey and Bruce	188 70	4,973 40	408	*17	69	*17	in fore-	
	Ontario and Quebec	339 00						going.	
	Credit Valley	175 20							
	West Ontario Pacific	26 60							
	Guelph Junction	15 50							
	Toronto Junction to Strachan Avenue	3 20							
12	Caraguet	68 00		3					
13	Carillon and Grenville	13 00		3					
14	Central Ontario	104 00		10					
15	Central of New Brunswick	68 00	6 66	1	2				
16	Chatham Branch	11 00		2					
17	Cornwallis Valley		14 00						
18	Cumberland Railway and Coal Co	32 00	14 00	10					
19	Dominion Lime Co	4 80							
20	Drummond County	14 50		1					
21	Elgin, Petibodiack and Havelock	27 75		2					
22	Erie and Huron	73 12		6					
23	Esquimalt and Nanaimo	78 00		4					
24	Fredericton and St. Mary's Railway Bridge Co	1 33							
25	Grand Trunk	879 59							
	Buffalo and Lake Huron	162 00							
	G. T., Georgian Bay and Lake Erie	172 75							
	South Norfolk	17 00							
	Montreal and Champlain Junction	81 25							
	Great Western	537 72							
	London and Port Stanley	23 84							
	Wellington, Grey and Bruce	168 09							
	London, Huron and Bruce	68 89							
	Brantford, Norfolk and Port Burwell	34 73							
	Midland	165 75	3,114 00	687					
	Toronto and Nipissing	111 50							
	Grand Junction	85 40							
	Whitby, Port Perry and Lindsay	46 50							
	Victoria (Lindsay to Haliburton)	53 25							
	Northern	205 37							
	Northern and Pacific Junction	111 37							
	Hamilton and North-Western	173 90							
	Madoc Junction to Bridgewater	8 60							
	Jacques Cartier Union	6 50							
	Carried forward		10,654 66	86 16	1514	29	86	17	

Rolling Stock for the Year ended 30th June, 1889.

Number of First-Class Cars.		Number of Second-Class and Emigrant Cars.		Number of Baggage, Mail and Express Cars.		Number of Cattle and Box Freight Cars.		Number of Platform Cars.		Number of Hopper and Dumping Cars.		Remarks.
Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	Owned.	Hired.	
3				1		9		20			1	
1		1				5		16			2	
1				1				5		24	3	
1				1		20		10			4	
											5	
1		1				1					6	
6	4		2	1	4	510	1300	20		6	7	
45		21		23		2099		337			8	
								188		48	9	Also 43 other cars.
75		82		47		1868		1520		2136	10	
17		15		4		178		125		in foregoing		Also 85 conductors' vans.
6		4		4		30		70		150		Also 8 snow ploughs and 7 flangers.
						25		85				Also 2 conductors' vans.
						88		10				
111	*5	122	*11	103	*21	7633	*1821	2697	*91	407	11	Also 494 vans, tool cars, etc. *Special trust.
1		1		2		4		16			12	
2		4		1		3		3			13	
2		3		3		24		92			14	
	2						6	32			15	
1		2						1			16	
											17	
3				3		3		39		162	18	
											19	Operated by Quebec Central.
1		1				2		10			20	
2		1		1		2		10			21	
9				3		30		12			22	
9				3		14		56		10	23	
											24	
366		230		214		13744		5818			25	
663	11	488	13	415	25	26292	3127	11187	91	2943		

No. 3.—SUMMARY STATEMENT of the different descriptions of

Number.	Name of Railway.	Length of Line.		Number of Engines.		Number of Sleeping Cars.		Number of Palace or Drawing Room Cars.	
		Completed.	Under Construction.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.
	Brought forward.....	10,654·66	86·16	1514	29	86	17		
26	Great Eastern.....	6·50	60·00						
27	Great Northern.....	7·84			1				
28	Great North-West Central.....		50·00						
29	Hereford.....	35·35	13·00		7				
30	Irondale, Bancroft and Ottawa.....	10·00	40·00	1					
31	Joggins.....	13·00		1					
32	Kent Northern.....	27·00		2					
33	Kingston and Pembroke.....	112·75		10					
34	Lower Laurentian.....	22·00		1					
35	L'Assomption.....	3·00		1					
36	Lake Erie, Essex and Detroit.....	38·00		4					
37	Lake Témiscamingue Colonization Railway Co.....	15·20		2					
38	Manitoba and North-Western..... 217·24 } Saskatchewan and Western..... 15·47 }	232·71		7					
39	Massawippi Valley.....	34·00							
40	Montreal and Western.....		30·00						
41	Montreal and Sorel.....	44·67		2	1				
42	Montreal and Lake Maskinonge.....	10·00							
43	Montreal and Vermont Junction.....	23·60							
44	Napanee, Tamworth and Quebec.....	28·50	27·00	3					
45	New Brunswick..... 174·00 } New Brunswick and Canada..... 127·00 } St. John and Maine..... 92·00 } Fredericton..... 22·50 }	415·50		49					
46	New Brunswick and Prince Edward Island.....	36·00		3					
47	Northern and Western of New Brunswick.....	116·00		6					
48	Northern Pacific and Manitoba.....	112·00		6					
49	North-Western Coal and Navigation Co.....	109·50		10					
50	Nova Scotia Central.....	34·00	40·00	5					
51	Nosbonsing and Nipissing.....	5·50		1					
52	Ottawa and Gatineau Valley.....		3·00						
53	Pontiac and Renfrew.....	4·25							
54	Pontiac Pacific Junction.....	71·00	15·00	4					
55	Qu'Appelle, Long Lake and Saskatchewan.....	22·00							
56	Quebec and Lake St. John.....	191·00		14	5				
57	Quebec Central.....	154·00		10					
58	Quebec, Montmorenci and Charlevoix.....	20·50		1					
59	Stanstead, Shefford and Chambly.....	43·00		6					
60	Short Line.....	82·50		5					
61	South Eastern..... 152·00 } Montreal, Portland and Boston..... 45·00 } Lake Champlain and St. Lawrence Jn. 63·00 }	260·00		30				2	
62	St. Catharines and Niagara Central.....	12·35		2					
63	St. John Bridge and Railway Extension.....	1·75							
64	St. John Valley and Rivière du Loup.....		3·00						
65	St. Louis, Richibucto and Buctouche.....	7·00							
66	Stewiacke Valley and Lansdowne.....		12·00						
67	Témiscouata.....	81·00		5					
68	Thousand Islands.....	4·08		1					
69	Western Counties.....	67·00	20·00	4					
70	Windsor and Annapolis..... 84·00 } Windsor Branch..... 32·00 }	116·00		10					
71	Winnipeg and Hudson Bay.....	40·00							
72	Wood Mountain and Qu'Appelle.....		17·00						
		13,324·71	416·16	1,718	43	86	17	2	

Number of First Class Cars.		Number of Second Class and Emigrant Cars.		Number of Baggage, Mail and Express Cars.		Number of Cattle and Box Freight Cars.		Number of Platform Cars.		Number of Hopper and Dumping Cars.		Remarks.
Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	Owued.	Hired.	
663	11	488	13	415	25	26292	3127	11187	91	2943	..	
..	1	1	26	
..	27	
..	28	
..	..	1	2	40	..	29	
1	..	1	1	..	6	30	
1	2	..	1	..	10	31	
5	..	5	..	5	..	25	..	204	32	
..	33	
1	34	
7	..	2	..	1	..	10	10	95	35	
..	..	2	1	..	17	36	
5	..	3	..	4	..	168	..	63	37	
..	38	Also 4 boarding cars and 4 cabooses.
..	39	Rolling stock furnished by lessees (Passumpsic Ry. Co.)
..	2	1	1	..	1	40	
..	41	
2	1	..	6	..	43	42	Return of 1888.
..	43	Operated by Central Vermont.
..	44	
28	..	22	..	16	..	542	..	721	45	
1	..	1	2	..	33	46	
2	2	..	12	..	76	47	
..	28	..	178	48	
2	..	2	18	..	2	..	217	49	
..	1	..	60	50	
..	35	51	
..	52	
1	..	1	..	1	..	5	..	52	20	..	53	
..	54	
6	..	10	..	8	..	58	..	193	..	5	55	
6	3	6	3	7	2	76	75	116	75	..	56	
..	24	57	
4	2	58	
4	2	..	8	..	42	59	
9	15	8	..	6	4	61	371	248	100	50	60	Late Grand Southern. Return of 1888.
2	1	5	61	
..	62	
..	63	Operated by New Brunswick Ry.
..	64	
..	65	Return of 1888.
..	66	
3	..	4	..	2	..	40	..	54	67	
1	1	1	68</	

No. 4.—SUMMARY STATEMENT of the Operations of the

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
1	Albert..... 47·75)	50·75		2,224	29,952	32,176
	Harvey Branch..... 3·00)					
2	Bay of Quinté and Navigation Co..... 3·50	3·50			17,444	17,444
3	Canada Atlantic..... 138·40	138·40	180,038	179,592	11,205	370,835
4	Canada Southern..... 365·11)	378·91	1,013,286	1,898,636	156,385	3,068,307
	Leamington and St. Clair..... 13·80)					
5	Canadian Government Railways—					
	Intercolonial..... 891·00	891·00	975,667	3,615,420	In foregoing.	4,591,087
	Prince Edward Island..... 210·60	210·60	81,628	164,897	do	246,525
	Eastern Extension..... 80·00	80·00			96,482	96,482
6	Canadian Pacific..... 3,415·30					
	Atlantic and North-West... 336·10					
	North Shore..... 206·10					
	St. Lawrence and Ottawa... 56·50					
	Toronto, Grey and Bruce... 188·70					
	Ontario and Quebec..... 339·00					
	Credit Valley..... 175·20	4,973·40	4,191,477	5,747,772	692,728	10,631,977
	West Ontario Pacific..... 26·60					
	Manitoba South Western Col- onization..... 211·20					
	Guelph Junction..... 15·50					
	Toronto Junction to Strachan Avenue..... 3·20					
7	Caraquet..... 68·00	68·00			40,170	40,170
8	Carillon and Grenville..... 13·00	13·00	9,500	600		10,100
9	Central Ontario..... 104·00	104·00	43,194	31,000	89,518	163,712
10	Chatham Branch..... 11·00	11·00			28,160	28,160
11	Cumberland Railway and Coal Co..... 32·00	32·00			108,729	108,729
12	Dominion Lime Co..... 4·80	4·80				
13	Drummond County..... 13·00	13·00		10,500		10,500
14	Elgin, Petitediac and Havelock..... 27·75	27·75			17,524	17,524
15	Erie and Huron..... 73·12	73·12	46,960	26,418	45,036	118,414
16	Esquimaux and Nanaimo..... 78·00	78·00			112,072	112,072
17	Fredericton and St. Mary's Ry. Bridge Co..... 1·33	1·33				
18	Grand Trunk..... 879·59)	3,114·00	5,085,279	8,166,160	2,356,595	15,608,034
	Buffalo and Lake Huron..... 162·00					
	G. T., Georgian Bay and Lake Erie..... 172·75					
	Montreal and Champlain Jn... 81·25					
	Great Western..... 537·72					
	London and Port Stanley... 23·84					
	Wellington, Grey and Bruce... 168·09					
	London, Huron and Bruce... 68·89					
	Brantford, Norfolk and Port Burwell..... 34·73					
	Midland..... 165·75					
	Toronto and Nipissing..... 111·50					
	Grand Junction..... 85·40					
	Whitby, Port Perry & Lindsay Victoria (Lindsay to Halibur- ton)..... 53·25					
	Northern..... 205·37					
	Northern and Pacific Junction 111·37					
	Hamilton and North-Western 173·90					
	Madoc Junction, to Bridge- water..... 8·60					
	South Norfolk..... 17·00)					
19	Great Northern..... 7·84	7·84			5,008	5,008
20	Joggins..... 13·00	13·00		4,537	11,518	16,055
	Carried forward.....	10,287·40	11,627,929	19,847,756	3,818,526	35,293,311

Year and Mileage, for the Year ended 30th June, 1889.

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passenger Trains—Miles per Hour.	Average Rate of Speed of Freight Trains—Miles per Hour.	Number.	Remarks.
32,176	8,133	21,556	16	12	1	
17,494	11,916	46,029	12	12	2	
509,742	131,177	407,500	35	15	3	
3,853,495	582,301	2,563,304	35	15	4	
5,486,856	1,091,189	1,204,790	.....	.....	5	
307,540	152,780	55,682	20	14		
107,009	45,083	14,087	.....	.....
12,995,172	2,457,306	2,636,121	22	14	6	
43,170	5,925	9,229	20	.....	7	
11,000	12,000	150	25	20	8	
163,712	66,518	60,735	20	16	9	
33,660	1,502	16,528	30	.....	10	
108,729	21,770	414,679	15	.....	11	
.....	.....	.....	.....	.....	12	Operated by Quebec Central.
10,500	900	34,137	20	.....	13	
19,425	8,037	11,320	.....	.....	14	
154,853	135,341	86,358	25	18	15	
112,072	34,104	20,860	20	12	16	
.....	3,041	6,695	.....	.....	17	Nine months.
19,667,562	5,917,742	7,128,973	30	15	18	
.....	
5,008	4,887	4,244	.....	.....	19	
17,055	9,554	35,110	.....	16	20	
43,656,229	10,701,206	14,778,087	.....	.....	.....

No. 4.—SUMMARY STATEMENT of the Operations

Number.	Name of Railway.	Mileage.	TRAIN MILEAGE.			
			Passenger Trains.	Freight Trains.	Mixed Trains.	Total Train Mileage.
	Brought forward	10,287 40	11,627,029	19,847,756	3,815,526	35,293,311
21	Kent Northern	27 00			18,366	18,366
22	Kingston and Pembroke	112 75	95,000		131,000	226,000
23	Lower Laurentian	22 00		7,318		7,318
24	L'Assomption	3 00			5,921	5,921
25	Lake Erie, Essex and Detroit	38 00	36,000		84,000	120,000
26	Lake Temiskaming Colonization and Rail- way Co.	15 20				
27	Manitoba and North-Western .. 217 24 } Saskatchewan and Western... 15 47 }	232 71	50,538	46,597	15,183	112,318
28	Massawippi Valley	34 00	59,784	101,840	4,865	166,489
29	Montreal and Sorel	44 67	8,190		4,095	12,285
30	Montreal and Lake Maskinongé	10 00				
31	Montreal and Vermont Junction	23 60	64,583	98,157	2,256	164,996
32	Napanee, Tamworth and Quebec	28 50			38,998	38,998
33	New Brunswick	174 00				
	New Brunswick and Canada .. 127 00	415 50	292,136	204,551	395,199	891,886
	St. John and Maine					
	Fredericton	22 50				
34	New Brunswick and P. E. Island	36 00	4,188	4,246	21,924	30,358
35	Northern and Western of New Brunswick	116 00	8,424	25,000	69,264	102,688
36	North-Western Coal and Navigation Co.	109 50			157,396	157,396
37	Nosbonsing and Nipissing	5 50		15,600		15,600
38	Pontiac Pacific Junction	61 00		3,917	37,560	41,477
39	Quebec and Lake St. John	177 00	106,783	70,318	43,123	220,044
40	Quebec Central	154 00	124,698	107,959	26,447	259,104
41	Stanstead, Shefford and Chambly	43 00	37,226	38,809	11,325	87,360
42	Shore Line	82 50		4,563	51,645	56,208
43	South-Eastern	152 00				
	Montreal, Portland and Boston .. 45 00	260 00	256,913	160,215	96,340	513,468
	Lake Champlain and St. Law- rence Junction					
		63 00				
44	St. Catharines and Niagara Central	12 35	4,001		4,940	8,941
45	St. John Bridge and Railway Extension	1 75				
46	St. Louis, Richibucto and Buctouche	7 00				
47	Temiscouata	81 00		544	12,657	13,201
48	Thousand Islands	4 08	11,060		4,382	15,442
49	Western Counties	67 00	17,494	2,001	35,255	54,750
50	Windsor and Annapolis	84 00				
	Windsor Branch	32 00	96,436		88,839	185,275
		12,628 01	12,900,483	20,739,391	5,179,506	38,819,380

of the Year and Mileage, &c.—*Concluded.*

Engine Mileage.	Total Number of Passengers Carried.	Tons of Freight of 2,000 lbs. Handled.	Average Rate of Speed of Passenger Trains—Miles per Hour.	Average Rate of Speed of Freight Trains—Miles per Hour.	Number.	Remarks.
43,656,229	10,701,206	14,778,087				
18,366	4,247	9,816	18	.....	21	
272,000	53,878	156,467	25	18	22	
7,318	.....	19,446	.....	20	23	
5,921	8,082	667	15	.....	24	
149,100	16,184	10,352	30	20	25	
.....	4,898	1,712	.....	.....	26	
192,162	22,697	50,084	27	15	27	
166,489	54,682	112,848	24	12	28	
12,285	9,500	3,484	20	15	29	
.....	.....	.....	.....	.....	30	No return furnished.
164,996	107,063	678,635	30	12	31	
38,998	30,111	33,527	18	18	32	
981,074	296,277	295,919	25	12	33	
36,275	18,717	32,566	18	15	34	
102,688	16,515	40,264	25	15	35	
214,732	1,868	93,055	.....	14	36	
16,800	.....	267,000	.....	25	37	
46,485	21,727	11,244	30	.....	38	
232,439	69,019	96,825	20	12	39	
276,946	113,632	122,924	25	15	40	
87,360	122,044	684,612	23	12	41	
57,708	11,200	12,774	22	22	42	Late Grand Southern Return of 1888.
649,741	182,548	219,067	27	16	43	
8,941	11,558	13,758	.....	.....	44	Nine months.
.....	91,475	75,466	.....	.....	45	
.....	.....	.....	.....	.....	46	No return furnished.
13,701	2,223	4,214	20	.....	47	
15,442	19,832	12,951	20	15	48	
63,104	37,387	22,725	24	20	49	
220,838	122,481	68,137	22	14	50	
47,708,138	12,151,105	17,928,626				

No. 5.—SUMMARY STATEMENT of Description of

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Live
			Barrels.	Tons.	Bushels.	Tons.	No.
1	Albert..... 47·75) Harvey Branch..... 3·00)	50·75	4,201	420	11,618	194	1,031
2	Bay of Quinté Ry. and Navigation Co. 3·50	3·50	27,510	2,751	192,433	5,773	15
3	Canada Atlantic..... 138·40	138·40	294,648	29,465	1,878,142	46,954	18,965
4	Canada Southern..... 365·11) Leamington and St. Clair... 13·80)	378·01	1,040,380	104,038	15,051,485	342,408	978,575
5	Canadian Government Railways— Intercolonial.....	891·00	927,014	92,701	1,519,862	38,656	77,661
	Prince Edward Island.....	210·60	22,512	2,251	487,035	8,498	11,561
	Eastern Extension.....	80·00	21,500	2,149	6,296	143	8,299
6	Canadian Pacific..... 3,415·30) Atlantic and North-West... 336·10) North Shore..... 206·10) St. Lawrence and Ottawa... 56·50) Toronto, Grey and Bruce... 188·70) Ontario and Quebec..... 339·00) Credit Valley..... 175·20) West Ontario Pacific..... 26·60) Manitoba South-Western Colonization..... 211·20) Guelph Junction..... 15·50) Toronto Junc. to Strachan Avenue..... 3·20)	4,973·40	1,857,472	185,777	14,456,904	366,681	228,272
7	Caraguet.....	68·00	4,000	400	4,000	90	50
8	Carillon and Grenville.....	13·00					
9	Central Ontario.....	104·00	16,700	1,670	40,000	4,000	1,376
10	Chatham Branch.....	11·00	22,416	2,197	20,689	621	474
11	Cumberland Railway and Coal Co.	32·00	10,440	1,044	10,500	178	26
12	Dominion Lime Co.	4·80					
13	Drummond County.....	13·00	1,350	135	2,580	60	
14	Elgin, Petittcodiac and Havelock.....	27·75	3,165	316	9,691	176	3,189
15	Erie and Huron.....	73·12	124,206	14,974	250,870	10,683	5,322
16	Esquimalt and Nanaimo.....	78·00	1,101	110	969	27	1,570
17	Fredericton and St. Mary's Ry. Bridge Co.	1·33					
18	Grand Trunk..... 879·59) Buffalo and Lake Huron ... 162·00) G.T., Georgian Bay and Lake Erie..... 172·75) South Norfolk..... 17·00) Montreal and Champlain Jn. 81·25) Great Western..... 537·72) London and Port Stanley... 23·84) Wellington, Grey and Bruce. 168·09) London, Huron and Bruce... 68·89) Brantford, Norfolk and Port Burwell..... 34·73) Midland..... 165·75) Toronto and Nipissing..... 111·50) Grand Junction..... 85·40) Whitby, Pt. Perry & Lindsay 46·50) Victoria (Lindsay to Hali- burton)..... 53·25) Northern..... 205·37) Northern and Pacific Junc. 111·37) Hamilton and N. Western... 173·90) Madoc Jn. to Bridgewater... 8·60) Jacques Cartier Union..... 6·50)	3,114	4,038,020	403,802	53,636,760	1,340,919	1,293,641
19	Great Northern.....	7·84	2,100	210	1,548	36	
20	Joggins.....	13·00	1,441	142	10,405	260	24
	Carried forward.....	10,287·40	8,420,176	844,552	87,591,787	2,166,357	2,629,051

Freight Carried, for the Year ended 30th June, 1889.

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
207	10,642,000	12,127	1,176	1,680	1,306	5,622	21,556	1	
12	14,403,000	14,403	4,199	4,199	9,828	9,063	46,029	2	
3,793	115,970,000	173,957	42,957	47,732	10,907	94,692	407,500	3	
195,715	33,401,696	54,937	233,395	350,093	151,785	1,364,328	2,563,304	4	
11,508	197,545,777	246,932	19,230	38,640	252,398	523,955	1,204,790	5	
1,659	3,541,304	5,798	2,131	3,967	33,509	in foreg'ng	55,682		
1,260	1,491,424	2,453	.....	.....	2,709	5,373	14,087		
86,773	427,051,269	581,823	100,907	179,928	656,420	578,719	2,636,121	6	
15	3,500,000	4,500	700	700	500	3,024	9,229	7	
.....	.....	.....	.....	.....	.....	150	150	8	
670	7,015,000	9,348	1,600	2,400	23,475	19,172	60,735	9	
190	2,450,000	3,675	406	580	5,195	4,070	16,528	10	
2	10,224,000	12,780	.....	.....	3,927	396,748	414,679	11	
.....	3,078,016	8,352	8,424	11,644	542	13,404	34,137	12	Operated by Que.
308	5,880,214	8,739	80	120	900	761	11,320	13	Central.
1,000	16,341,500	23,345	362	480	14,952	20,924	86,358	14	
495	1,087,662	1,675	2,337	3,675	6,669	8,209	20,860	15	
.....	.....	.....	.....	.....	.....	.....	6,695	16	
.....	.....	.....	.....	.....	.....	.....	.....	17	No details.
210,437	623,459,371	912,853	169,409	301,541	882,956	3,076,465	7,128,973	18	
.....	1,106,400	1,098	704	1,042	358	1,500	4,244	19	
12	24,320	40	2,000	1,600	.....	*33,056	35,110	20	* Coal.
514,056	1,478,212,953	2,078,835	590,017	950,021	2,058,336	6,159,235	14,778,087		

No. 5.—SUMMARY STATEMENT of Description

Number.	Name of Railway.	Mileage.	Flour.		Grain.		Liv
			Barrels.	Tons.	Bushels.	Tons.	No.
	Brought forward	10,287 40	8,420,176	844,552	87,591,787	2,166,357	2,629,051
21	Kent Northern.	27 00	8,809	880	3,000	87	211
22	Kingston and Pembroke.	112 75	3,000	300	171,000	4,130	630
23	Lower Laurentian	22 00					
24	L'Assomption	3 00	1,300	120			
25	Lake Erie, Essex and Detroit.	38 00	1,152	142	69,226	1,868	2,409
26	Lake Temiskaming Colonization and Railway Co.	15 20	2,590	259	18,318	426	
27	Manitoba and North-Western. 217 24 } Saskatchewan and Western. 15 47 }	232 71	22,173	2,209	822,407	21,816	2,301
28	Massawippi Valley.	34 00	6,400	640	229,964	5,348	5,100
29	Montreal and Sorel.	44 67					
30	Montreal and Lake Maskinongé.	7 00					
31	Montreal and Vermont Junction.	23 60	317,731	30,535	7,290,639	155,399	190,439
32	Napanee, Tamworth and Quebec.	28 50	8,330	833	39,600	965	1,800
33	New Brunswick. 174 00 } New Brunswick and Canada 127 00 } St. John and Maine. 92 00 } Fredericton. 22 50 }	415 50	120,616	12,061	303,237	5,434	44,657
34	New Brunswick and P. E. Island.	36 00	12,060	1,206	14,175	243	1,090
35	Northern and Western of N. Brunswick	116 00	14,066	1,407	61,318	1,073	1,148
36	North-Western Coal and Navigation Co.	109 50	6,220	622	14,287	243	140
37	Nosbonsing and Nipissing.	5 50					
38	Pontiac Pacific Junction.	61 00	10,262	1,026	27,268	683	2,761
39	Quebec and Lake St. John.	177 00	4,800	480	4,800	120	125
40	Quebec Central.	154 00	76,830	7,683	103,114	2,398	6,270
41	Stanstead, Shefford and Chambly.	43 00	328,302	31,566	7,332,027	156,413	190,616
42	Shore Line.	82 50	6,660	660	9,056	184	234
43	South Eastern. 152 00 } Montreal, Portland & Boston 45 00 } Lake Champlain and St. Law- rence Junction. 63 00 }	260 00	108,850	10,885	360,383	8,381	30,180
44	St. Catharines and Niagara Central.	12 35	3,750	375	18,000	540	
45	St. John Bridge and Ry. Extension Co.	1 75					
46	St. Louis, Richibucto and Buctouche.	7 00					
47	Temiscouata.	81 00	7,020	702	4,100	123	30
48	Thousand Islands.	4 08					750
49	Western Counties.	67 00	7,551	755	1,364	25	421
50	Windsor and Annapolis. 84 00 } Windsor Branch. 32 00 }	116 000	46,752	4,675			17,538
	Total.	12,628 01	9,545,390	954,573	104,489,065	2,532,393	3,128,901

of Freight Carried, &c.—*Concluded.*

Stock.	Lumber of all kinds except Firewood.		Firewood.		Manu- factured Goods.	All other Articles.	Total Weight Carried.	Number.	Remarks.
	Tons.	Feet.	Tons.	Cords.	Tons.	Tons.	Tons.		
514,056	1,478,212,953	2,078,835	590,017	950,021	2,058,336	6,159,235	14,778,087		
100	2,827,000	3,649			2,600	2,500	9,816	21	
315	69,350,000	104,025	9,618	17,790	18,132	11,775	156,467	22	
	3,476,192	5,724	10,103	13,236		486	19,446	23	
	131,328	216			57	274	667	24	
739	38,920	1,363	430	644	348	5,248	10,352	25	
					446	581	1,712	26	
1,259	4,017,000	6,026	730	1,145	16,377	1,252	50,084	27	
1,020	15,120,960	24,870				80,970	112,848	28	
						3,484	3,484	29	
32,411	37,390,000	46,704	19	34	124,168	289,384	678,635	30	No return fur- nished.
990	1,300,000	1,282	7,035	12,292	6,462	10,703	33,527	32	
5,168	42,266,000	53,490	9,980	13,851	170,962	34,953	295,919	33	
111	5,680,000	8,520	651	977	1,329	20,180	32,566	34	
254	10,902,990	17,367	2,808	3,900	1,527	14,736	40,264	35	
70	2,487,766	4,975			1,144	86,001	93,055	36	
							*267,000	37	* Sawlogs.
285	621,064	4,318	731	1,182	2,777	973	11,244	38	
75	22,560,000	33,840	26,700	44,520	7,965	9,825	96,825	39	
1,254	26,962,584	44,348	6,614	9,829	148	58,261	122,924	40	
32,476	38,219,000	47,740	1,172	1,393	125,348	289,676	684,612	41	
63	4,132,000	5,945	649	982	1,565	3,374	12,774	42	Late Grand Southern, re- turn of 1888.
6,036	40,736,000	67,000			59,320	67,445	219,067	43	
					1,000	11,843	13,758	44	[Railway. Operated by N. B. No return fur- nished.
							75,466	45	
15	600,000	720	1,395	1,860	367	427	4,214	46	
400	118,000,000	1,290			9,261	2,000	12,951	48	
142	12,084,000	15,420	2,252	3,670	2,270	443	22,725	49	
3,287	7,868,870	9,836	1,437	2,053	15,475	32,811	68,137	50	
600,526	1,946,986,627	2,587,503	672,431	1,078,379	2,627,384	7,198,841	17,928,626		

No. 6.—SUMMARY STATEMENT of Earnings, for the Year ended 30th June, 1889.

Name of Railway.	Mileage.	Passenger Traffic.		Freight Traffic.		Mails and Express Freight.		Other Sources.		Total.		Remarks.
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
1. Albert.....	47.75	5,642	28	12,178	74	2,346	16	672	45	20,889	63	Operated by Quebec Central.
Harvey Branch.....	3.00											
2 Bay of Quinte and Navigation Co.....	3.50	2,708	65	16,233	41	1,070	30	1,095	22	21,107	58	
3 Canada Atlantic.....	138.40	110,790	65	333,919	81	24,639	50	46,022	56	515,372	52	
4 Canada Southern.....	365.11											
Leamington and St. Clair.....	13.80	1,201,388	97	2,803,088	85	145,265	32	4,223	85	4,153,966	99	
5 Canadian Government Railways—												
Intercolonial.....	891.00	867,170	70	1,882,361	01	145,832	64			2,895,364	35	
Prince Edward Island.....	210.60	74,631	01	79,594	05	16,755	00	389	50	171,369	56	
Eastern Extension.....	80.00	39,075	77	26,733	43	6,300	70	326	75	72,436	65	
6 Canadian Pacific.....	3,415.30											
Atlantic and North-West.....	336.10											
North Shore.....	206.10											
St. Lawrence and Ottawa.....	56.50											
Toronto, Grey and Bruce.....	188.70											
Ontario and Quebec.....	339.00											
Credit Valley.....	175.20											
West Ontario Pacific.....	26.60											
Manitoba South-Western Colonization.....	211.20											
Guelph Junction.....	15.50											
Toronto Junction to Strachan Avenue.....	3.20											
7 Caraque.....	68.00	5,308	53	11,260	51	1,641	12			18,210	16	
8 Carillon and Grenville.....	13.00	2,713	49	348	62					3,062	11	
9 Central Ontario.....	104.00	37,003	50	53,296	92	6,925	58	3,140	72	100,366	72	
10 Chatham Branch.....	11.00	3,020	05	12,555	53	1,229	21			16,804	79	
11 Cumberland Railway and Coal Co.....	32.00	8,491	55	27,914	31	1,332	84	62,086	20	99,824	90	
12 Dominion Line Co.....	4.80											
13 Drummond County.....	13.00	208	00	15,392	85					15,600	85	
14 Elgin, Petrieodac and Havelock.....	27.75	2,206	02	9,438	80	633	93	161	39	12,440	14	
15 Erie and Huron.....	73.12	54,151	28	56,993	97	5,153	40	969	60	117,268	25	
16 Esquimalt and Nanaimo.....	78.00	60,794	47	36,134	10	3,893	76	1,317	50	102,139	83	
17 Fredericton and St. Mary's Railway Bridge Co.....	1.33	304	10	1,242	24					1,546	34	
18 Grand Trunk.....	879.59											
Buffalo and Lake Huron.....	162.00											
G. T., Georgian Bay and Lake Erie.....	172.75											
South Norfolk.....	17.00											
Montreal and Champlain Junction.....	81.25											
Great Western.....	537.72											
London and Port Stanley.....	23.84											
Wellington, Grey and Bruce.....	108.09											
London, Huron and Bruce.....	68.89											
Brantford, Norfolk and Pt. Burwell.....	34.73											
	3,114.00	5,532,749	41	11,061,589	36	636,476	18	95,994	30	17,396,809	25	

No. 7.—SUMMARY STATEMENT of Operating Expenses, for the Year ended 30th June, 1889.

No.	Name of Railway.	Mileage.	Maintenance of Line, Buildings, &c.		Working and Repairs of Engines		Working and Repairs of Cars.		General Operating Expenses.		Total.	Remarks.
			\$	cts.	\$	cts.	\$	cts.	\$	cts.		
1	Albert.....	47 75	6,305	09	6,270	37	623	30	7,539	42	20,738 18	
2	Bay of Quinté Railway and Navigation Co.....	3 00	2,304	37	8,431	00	613	20	4,677	51	16,026 08	
3	Canada Atlantic.....	138 40	57,312	15	114,567	88	27,232	50	108,057	48	307,170 01	
4	Canada Southern.....	365 11	405,128	53	799,945	45	289,771	33	1,404,588	34	2,899,433 65	
5	Leamington and St. Clair.....	13 80										
	Canadian Government Railways:—											
	Intercolonial.....	891 00	789,678	18	1,107,338	19	448,694	33	808,217	99	3,153,928 69	
	Prince Edward Island.....	210 60	112,635	46	60,357	88	17,608	10	56,958	00	247,559 44	
	Eastern Extension.....	80 00	38,281	32	20,176	01	6,322	67	25,339	04	90,719 04	
6	Canadian Pacific.....	3415 30										
	Atlantic and North-West.....	336 10										
	North Shore.....	206 10										
	St. Lawrence and Ottawa.....	56 50										
	Toronto, Grey and Bruce.....	188 70										
	Ontario and Quebec.....	339 00										
	Credit Valley.....	175 20										
	West Ontario Pacific.....	26 60										
	Manitoba South-Western Colonization.....	211 20										
	Guelph Junction.....	15 50										
	Toronto Junction to Strachan Avenue.....	3 20										
7	Carleton Place and Strachan Avenue.....	68 00	11,916	12	9,922	00	400	00	5,171	11	27,409 23	No details.
8	Carleton and Grenville.....	13 00									3,907 14	
9	Central Ontario.....	104 00	30,991	78	24,160	58	3,668	17	36,104	85	94,925 38	
10	Chatham Branch.....	11 00	5,660	41	5,048	64	900	00	1,620	00	13,229 05	
11	Cumberland Railway and Coal Co.....	32 00	16,041	84	19,331	56	4,896	30	10,615	85	50,885 55	
12	Dominion Line Co.....	4 80										
13	Drummond County.....	13 00	3,845	73	4,840	19	239	52	837	26	9,762 70	Operated by Quebec Central.
14	Elgin, Petrie and Havelock.....	27 75	1,508	94	3,079	30	73	30	2,008	87	6,670 41	
15	Erie and Huron.....	73 12	20,736	20	28,922	95	4,846	40	27,757	15	82,262 70	
16	Esquimalt and Nanaimo.....	78 00	39,205	44	25,572	30	10,361	58	30,228	33	105,367 65	
17	Fredericton and St. Mary's Railway and Bridge Co.....	1 38							1,300	00	1,300 00	
18	Grand Trunk.....	879 59										
	Buffalo and Lake Huron.....	162 00										
	G. T. Georgian Bay and Lake Erie.....	172 75										
	South Norfolk.....	17 00										
	Montreal and Champlain Junction.....	81 25										
	Great Western.....	537 72										
	London and Port Stanley.....	23 84										
	Wellington, Grey and Bruce.....	168 09										
	London, Huron and Bruce.....	68 80										
	Brautford, Norfolk and Port Burwell.....	34 73										
		3114 00	2,402,539	76	4,144,796	05	1,296,229	56	4,349,687	48	12,193,252 85	

No. 8.—SUMMARY OF ACCIDENTS

Number.	Name of Railway.	Mileage.	Passengers, Employés, or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.	
				Killed.	Injured.	Killed.	Injured.
1	Albert	47·75 }	Employé				
	Harvey Branch	3·00 }					
2	Bay of Quinté and Navigation Co.	3·50	.....			
3	Canada Atlantic	138·40	Employés				
4	Canada Southern	365·11 }	{ Passengers		2		
	Leamington and St. Clair	13·80 }	{ Employés		2	2	6
			{ Others				
5	Canadian Government Railways—						
	Intercolonial	891·00	{ Passengers				4
			{ Employés	4	12		3
			{ Others		3		1
	Eastern Extension	80·00	{ Employés	3			
			{ Others				
	Prince Edward Island	210·60	Employés	1	1		
6	Canadian Pacific	3,415·30 }	{ Passengers				
	Atlantic and North-West	336·10					
	North Shore	206·10					
	St. Lawrence and Ottawa	56·50					
	Toronto, Grey and Bruce	188·70					
	Ontario and Quebec	339·00		1	4	3	6
	Credit Valley	175·20		8	21	2	14
	West Ontario Pacific	26·60		1		2	2
	Manitoba South-Western Colonization	211·20					
	Guelph Junction	15·50					
	Toronto Junction and Strachan Avenue	3·20 }					
7	Caraguet	68·00					
8	Carillon and Grenville	13·00					
9	Central Ontario	104·00	{ Employés		1		
			{ Others				
10	Chatham Branch	11·00					
11	Cumberland Railway and Coal Co.	32·00					
12	Dominion Lime Co	4·80					
13	Drummond County	13·00					
14	Elgin, Petritcodiac and Havelock	27·75					
15	Erie and Huron	73·12	{ Employés				
			{ Others				
16	Esquimalt and Nanaimo	78·00	Others				
17	Fredericton and St. Mary's Railway and Bridge Co.	1·33					
18	Grand Trunk	879·59 }	{ Passengers				
	Buffalo and Lake Huron	162·00					
	Grand Trunk, Georgian Bay and Lake Erie	172·75					
	South Norfolk	17·00					
	Montreal and Champlain Junction	81·25					
	Great Western	537·72					
	London and Port Stanley	23·84					
	Wellington, Grey and Bruce	168·09					
	London, Huron and Bruce	68·89		1	3	2	7
	Brantford, Norfolk and Port Burwell	34·73		7	35	4	7
	Midland	165·75		2		2	15
	Toronto and Nipissing	111·50					
	Grand Junction	85·40					
	Whitby, Port Perry and Lindsay	46·50					
	Victoria (Lindsay to Haliburton)	53·25					
	Northern	205·37					
	Northern and Pacific Junction	111·37					
	Hamilton and North-Western	173·90					
	Madoc Junction to Bridgewater	8·60					
	Jacques Cartier Union	6·50 }					
	Carried forward	10,266·56		28	84	17	65

No. 8.—SUMMARY OF ACCIDENTS

Number.	Name of Railway.	Mileage.	Passengers, Employés, or Others.	Fell from Cars or Engines.		Jumping on or off Trains or Engines when in motion.	
				Killed.	Injured.	Killed.	Injured.
	Brought forward.....	10,266·56		28	84	17	65
19	Great Northern.....	8·84					
20	Joggins.....	13·00					
21	Kent Northern.....	27·00					
22	Kingston and Pembroke.....	112·75					
23	Lower Laurentian.....	22·00					
24	L'Assomption.....	3·00					
25	Lake Erie, Essex and Detroit.....	38·00					
26	Lake Temiscamingue Colonization and Railway Co.....	15·20					
27	Manitoba and North-Western.....	217·14	Employés.....				
	Saskatchewan and Western.....	15·47					
28	Massawippi Valley.....	34·00	Employé.....				
29	Montreal and Sorel.....	44·67					
30	Montreal and Lake Maskinongé.....	10·00					
31	Montreal and Vermont Junction.....	23·60	Passenger.....				
32	Napanee, Tamworth and Quebec.....	28·50					
33	New Brunswick.....	174·00	{ Passengers.....				1
	New Brunswick and Canada.....	127·00					1
	St. John and Maine.....	92·00					
	Fredericton.....	22·50					
34	New Brunswick and Prince Edward Island.....	36·00					
35	Northern and Western of New Brunswick.....	116·00					
36	North-Western Coal and Navigation Co.....	109·50					
37	Nosbonsing and Nipissing.....	5·50					
38	Pontiac Pacific Junction.....	61·00	Employés.....				
39	Quebec and Lake St. John.....	177·00	Employés.....	1		1	
40	Quebec Central.....	154·00	Passengers.....				
			{ Passengers.....	1			
41	Stanstead, Shefford and Chambly.....	43·00	{ Employés.....		1		
			{ Others.....				
42	Shore Line (late Grand Southern).....	82·50					
43	South Eastern.....	152·00	{ Employés.....			3	
	Montreal, Portland and Boston.....	45·00					
	Lake Champlain and St. Lawrence Junction.....	63·00					
44	St. Catharines and Niagara Central.....	12·35					
45	St. John Bridge and Railway Extension Co.....	1·75					
46	St. Louis, Richibucto and Buctouche.....	7·00					
47	Temiscouata.....	81·00					
48	Thousand Islands.....	4·08					
49	Western Counties.....	67·00					
50	Windsor and Annapolis.....	116·00	Others.....				
	Total.....	12,648·06		30	88	18	67

for the Year ended 30th June, 1889—*Concluded.*

At work on or near Track making up Trains.		Putting Arms or Heads out of Wind'ws		Coupling Cars.		Collisions, or by Trains thrown from Track.		Walking, standing, lying or being on Track.		Ex-plosions.		Striking Bridges.		Other Causes.		Totals.		Number.
Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
5	22	.....	.....	8	329	41	103	81	117	.....	.....	1	2	16	133	197	855	19
.....	20
.....	21
.....	22
.....	23
.....	24
.....	25
.....	26
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	27
.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	28
.....	29
.....	1	.....	.....	.....	1	.....	30
.....	31
.....	32
.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	33
.....	1	2	.....	.....	.....	.....	.....	.....	1	1	34
.....	1	2	35
.....	36
.....	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	2	38
.....	1	1	.....	.....	.....	.....	.....	.....	.....	2	1	39
.....	1	1	40
.....	1	41
.....	1	.....	.....	.....	.....	.....	.....	.....	1	.....	42
.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	7	43
.....	2	.....	.....	.....	.....	.....	.....	1	2	1	44
.....	45
.....	46
.....	47
.....	48
.....	3	.....	.....	.....	.....	.....	.....	.....	3	.....	49
.....	50
5	22	.....	.....	8	337	41	105	90	120	.....	.....	2	2	16	134	210	875	

No. 9—LINES of Railway owned by Coal and Iron Mines, for the Year ended
30th June, 1889.

Name.	Length of Rail- way.	Gauge.	No. of Engines.	No. of Waggons.	Remarks.
NOVA SCOTIA.					
Intercolonial Coal Mining Co.....	8'00	4'8½	4	118	Cars furnished by Intercolonial Ry.
Acadia Coal Co.....	6'00	4'8½	2	.....
Londonderry Iron Co	11'00	4'8½	3	24	
do do	3'00	3'0	2	27	
Albion.....	3'00	4'8½	3	180	
	31'00		14	349	
CAPE BRETON.					
Old Bridgeport.....	75	4'8½	Engines and cars furnished by Inter- national Coal and Railway Co.
General Mining Association—					
Sidney.....	4'80	4'8½	3	208	
Victoria.....	5'00	4'8½	2	117	
Sydney and Louisburg.....	43'00	3'0	3	224	
Gowrie.....	1'50	3'6	2	123	
International.....	12'00	4'8½	3	176	
Caledonia.....	2'25	4'8½	2	120	
	69'30		15	968	

No. 10—STATEMENT of Aid granted to Railways—Constructed and under Construction—by Governments, for the Year ended 30th June, 1889.

Name of Railway.	Loan.		Total.		Bonus.		Total.		Subscription to Shares or Bonds.		Total.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Albert.....	15,000	00										
Albert Southern.....					14,665	45						
Baie des Chaleurs.....					51,200	00						
Belleville and North Hastings.....					620,000	00						
Beauharnois Junction.....					22,400	00						
Beaufort, Waterloo and Lake Erie.....					96,000	00						
Brookville, Westport and Sault Ste. Marie.....					57,600	00						
Buctouche and Moncton.....					192,000	00						
Canada Atlantic.....					102,400	00						
Canada Central.....					314,400	00						
Canadian Pacific.....					1,525,250	00						
Cape Breton.....					55,172,713	71						
Caraguet.....					1,849,228	09						
Central of New Brunswick.....					224,000	00						
Chatham Branch.....					211,512	54						
Cornwallis Valley.....					24,439	84						
Cumberland Railway and Coal Company.....					44,800	00						
Drummond County.....					110,400	00						
Dominion Lime Company.....					22,400	00						
Eastern Extension.....					1,318,731	49						
Elgin, Petitoctiac and Havelock.....					82,652	82						
Erie and Huron.....					96,000	00						
Esquimaux and Nanaimo.....					750,000	00						
Fredericton and St. Mary's Railway Bridge Co.....	300,000	00			30,000	00						
Grand Trunk.....	15,142,633	33										
do Georgian Bay and Lake Erie.....					48,000	00						
Great Eastern.....					192,000	00						
Great Northern.....					89,600	00						
Guelph Junction.....					51,200	00						
Harvey Branch.....					9,600	00						
Hereford.....					156,800	00						
Intercolonial.....					46,542,987	33						
International.....					156,800	00						
Irondale, Bancroft and Ottawa.....					160,000	00						
Jacques Cartier Union.....					20,000	00						
Carried forward.....	15,457,633	33			110,404,587	27						

No. 10.—STATEMENT of Aid granted to Railways by Government—Continued

Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.	§ cts.
Brought forward.....	15,457,633 33		110,404,581 27			
Joggins.....			58,400 00			
Kent Northern.....			58,334 87			
Kingston and Pembroke.....			48,000 00			
L'Assomption.....			11,200 00			
Lake Erie, Essex and Detroit.....			118,400 00			
Lake Temiscaninque Colonization.....			113,200 00			
Leamington and St. Clair.....			51,200 00			
Lower Laurentian.....			217,600 00			
Massawippi Valley.....			80,000 00			
Montreal and Lake Maskinongé.....			32,000 00			
Montreal and Champlain Junction.....			103,600 00			
Montreal and Sorel.....			72,000 00			
Montreal and Western.....			361,270 00			
Napanee, Tamworth and Quebec.....			204,400 00			
New Brunswick and Prince Edward Island.....			118,400 00			
Northern and Western of New Brunswick.....			320,000 00			
Northern and Pacific Junction.....			1,320,000 00			
Nova Scotia Central.....			256,000 00			
Oxford and New Glasgow.....			1,281,254 97			
Ottawa and Gatineau Valley.....			320,000 00			
Pontiac Pacific Junction.....			313,100 00			
Pentiac and Renfrew.....			19,200 00			
Prince Edward Island.....			3,741,780 89			
Quebec and Lake St. John.....			935,095 00			
Quebec Central.....			348,342 00			
Quebec, Montmorency and Charlevoix.....			90,000 00			
Quebec, Montreal, Ottawa and Occidental, Quebec to Montreal.....			4954,000 00			
do Montreal to Ottawa.....			+1,440,000 00			
St. Catharines and Niagara Central.....			102,400 00			
St. Louis, Richibucto and Ruetouche.....			22,400 00			
St. John Bridge and Railway Extension.....	433,900 00		140,800 00			
St. John Valley and Rivière du Loup.....			54,400 00			
South Norfolk.....			80,000 00			
Stewiacke Valley and Lansdowne.....			598,000 00			
Temiscouata.....			54,400 00			
Thousand Islands.....						

Toronto, Grey and Bruce.....	.....	17,312 00	.....	.....
West Ontario Pacific.....	.....	256,000 00	.....	.....
Windsor and Amnapolis.....	.....	1,089,674 00	.....	.....
	15,891,533 33	125,812,745 00		
ONTARIO GOVERNMENT.				
Canada Atlantic.....	.....	270,000 00	.....	.....
Canada Central.....	.....	1,479,000 00	.....	.....
Canada Southern.....	.....	147,858 65	.....	.....
Central Ontario.....	.....	126,500 00	.....	.....
Cobourg, Blariton and Marmora.....	26,000 00	18,740 00	.....	.....
Credit Valley.....	.....	531,000 00	.....	.....
Erie and Huron.....	.....	83,000 00	.....	.....
Grand Junction.....	.....	182,500 00	.....	.....
Georgian Bay and Lake Erie.....	.....	336,000 00	.....	.....
Hamilton and North-Western.....	.....	565,020 00	.....	.....
Kingston and Pembroke.....	.....	456,493 00	.....	.....
London, Huron and Bruce.....	.....	178,630 08	.....	.....
Midland.....	.....	168,350 20	.....	.....
Northern.....	.....	196,188 00	.....	.....
Toronto and Nipissing.....	.....	105,212 00	.....	.....
Lake Simcoe Junction.....	.....	53,000 00	.....	.....
Toronto, Grey and Bruce.....	.....	375,282 00	.....	.....
Victoria.....	.....	312,000 00	.....	.....
Wellington, Grey and Bruce.....	.....	241,276 00	.....	.....
Whitby, Fort Perry and Lindsay.....	.....	94,957 59	.....	.....
	26,000 00	5,921,007 52		
QUEBEC GOVERNMENT.				
Baie des Chaleurs.....	.....	700,000 00	.....	.....
Great Eastern.....	.....	156,000 00	.....	.....
Drummond County.....	.....	156,000 00	.....	.....
Hereford.....	.....	46,920 00	.....	.....
International.....	.....	391,122 02	.....	.....
Lake Champlain and St. Lawrence Junction.....	.....	380,000 00	.....	.....
Lake Teniskaming Colonization Railway Company.....	.....	113,200 00	.....	.....
L'Assomption.....	.....	7,350 00	.....	.....
Lévis and Kennebec.....	.....	+	.....	.....
Missisquoi Valley.....	.....	228,000 00	.....	.....
Montreal and Champlain Junction.....	.....	328,895 00	.....	.....
Montreal, Portland and Boston.....	.....	197,582 00	.....	.....
Montreal and Western.....	.....	350,000 00	.....	.....
Ottawa and Gatineau Valley.....	.....	320,000 00	.....	.....
Pontiac Pacific Junction.....	.....	600,000 00	.....	.....
Quebec and Lake St. John.....	.....	2,114,000 00	.....	.....
Carried forward.....	15,917,533 33	6,089,069 02	131,733,752 52	.....

+ Included in Quebec Central.

* Dominion Government pays to Quebec Government 5 per cent. per annum on these two amounts.

No. 10.—STATEMENT of Aid granted to Railways by Government—*Concluded.*

Name of Railway.	Total.		Total.		Bonus.	Total.		Total.		Subscription to Shares or Bonds.	Total.	
	\$	cts.	\$	cts.		\$	cts.	\$	cts.		\$	cts.
Brought forward			15,917,533.33		6,089,069.02	131,733,752.52						
QUEBEC GOVERNMENT— <i>Concluded.</i>												
Quebec Central	3,722,956.00				681,250.00							
Quebec, Montreal, Ottawa and Occidental					727,000.00							
Quebec, Montmorenci and Charlevoix					162,000.00							
South-Eastern					444,000.00							
Teniscouata					462,000.00							
Waterloo and Magog					92,000.00							
			3,722,956.00			8,657,319.02						
NEW BRUNSWICK GOVERNMENT.												
Albert					455,000.00							
Albert Southern					52,500.00							
Buctouche and Moncton					96,000.00							
Caracquet					180,000.00							
Central of New Brunswick					132,000.00							
Chatham Branch					32,000.00							
Fredericton					230,000.00							
Grand Southern					425,000.00							
Harvey Branch					9,000.00							
Kent Northern					135,000.00							
New Brunswick					76,000.00							
New Brunswick and Canada					575,000.00							
New Brunswick and Prince Edward Island					108,000.00							
Northern and Western					321,500.00							
Petitcodiac and Elgin (Elgin, Petitcodiac and Havelock)					107,500.00							
St. Martin's and Upham					145,665.00							
St. John and Maine					488,000.00					300,000.00		
St. John Valley and Rivière du Loup					195,000.00							
St. Louis, Richibucto and Buctouche					21,000.00							
Teniscouata					36,000.00							
						4,212,165.00					300,000.00	
NOVA SCOTIA GOVERNMENT.												
Halifax and Cape Breton Railway and Coal Co. (Eastern Extension)					643,545.00							
Joggins					38,400.00							

Nova Scotia Central.....	.....	.....	411,119 94	
Springhill and Parrsboro' (Cumberland Railway and Coal Co.).....	.....	.....	189,030 93	
Stawiacke Valley and Lansdowne.....	.....	.....	80,000 00	
Western Counties.....	.....	50,000 00	679,100 00	2,041,195 87
MANITOBA GOVERNMENT.				
Manitoba and North Western.....	.....	.....
Manitoba South-Western Colonization.....	739,000 00	.....	
Northern Pacific and Manitoba.....	900,000 00	.....	532,250 00	532,250 00
Saskatchewan and Western.....	50,000 00	.....	
Winnipeg and Hudson Bay.....	256,000 00	1,945,000 00		
BRITISH COLUMBIA GOVERNMENT.				
Canadian Pacific.....	.....	.....	37,500 00	37,500 00
Total Aid from Governments.....	.....	21,635,489 33	.....	147,214,182 41
				300,000 00

+ Granted to late European and North American Railway.

No. 10.—STATEMENT of Aid granted to Railways by Municipalities, 30th June, 1889.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscriptions to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
ONTARIO.							
Deseronto	Bay of Quinté and Navigation Company						
City of Brantford	Brantford, Waterloo & Lake Erie			25,000 00	5,000 00		25,000 00
Township of Oakland	do			9,000 00			9,000 00
Village of Waterford	do			5,000 00			5,000 00
TOWN OF BROCKVILLE							
Elizabethtown	Brockville, Westport and Sault Ste. Marie			36,000 00			36,000 00
Rear of Yonge and Escott	do			7,000 00			7,000 00
Rear of Leeds and Lansdowne	do			15,000 00			15,000 00
Bastard and Burgess	do			5,000 00			5,000 00
South Crosby	do			28,000 00			28,000 00
Village of Newboro'	do			6,000 00			6,000 00
North Crosby	do			4,000 00			4,000 00
Various Municipalities							
Renfrew	Buffalo and Lake Huron			966,000 00	116,000 00		116,000 00
Horton	Canada Central				966,000 00	30,000 00	30,000 00
Admaston	do					7,500 00	7,500 00
COUNTY OF ELGIN							
Township of Townsend	Canada Southern			200,000 00			200,000 00
do	do			30,000 00			30,000 00
do	do			15,000 00			15,000 00
Town of St. Thomas	do			15,000 00			15,000 00
Township of Malden	do			25,000 00			25,000 00
Town of Amherstburg	do			15,000 00			15,000 00
South Norwich	do			7,500 00			7,500 00
NORTHUMBERLAND AND DURHAM							
Trenton Village	Cobourg, Blairton and Marmora			113,500 00	322,500 00		322,500 00
Wellington Village	Central Ontario			10,000 00	113,500 00		113,500 00
Town of Picton	do			2,500 00			2,500 00
County of Prince Edward	do			21,000 00			21,000 00
				60,000 00			60,000 00
							93,500 00
							42,500 00

42,500 00

do Oxford	Credit Valley	200,000 00		
do Wellington.....	do	135,000 00		
do Waterloo.....	do	110,000 00		
do Peel.....	do	75,000 00		
do Halton.....	do	70,000 00		
City of Toronto.....	do	330,000 00		
do St. Thomas.....	do	50,000 00		
Town of Milton.....	do	30,000 00		
do Brampton.....	do	20,000 00		
do Ingersoll.....	do	10,000 00		
do Orangeville.....	do	15,000 00		
Village of Streetsville.....	do	20,000 00		
County of Kent.....	Erie and Huron.....	1,085,000 00		
Town of Chatham.....	do	155,000 00		
do Dresden.....	do	30,000 00		
do Blenheim.....	do	20,500 00		
Village of Wallaceburg.....	do	11,000 00		
Township of Sombra.....	do	14,000 00		
do Samia.....	do	16,000 00		
do Woodhouse.....	Georgian Bay and Lake Erie.....	15,000 00		
Town of Simcoe.....	do	10,000 00		
Township of South Norwich.....	do	10,000 00		
do North do	do	40,000 00		
Town of Woodstock.....	do	25,000 00		
Township of East Oxford.....	do	25,000 00		
do Woodstock.....	do	60,000 00		
Town of Woodstock.....	do	120,000 00		
do Stratford.....	do	40,000 00		
County of Perth.....	do	10,000 00		
Township of Mornington.....	do	15,000 00		
do Elma.....	do	10,000 00		
Town of Listowel.....	do	10,000 00		
Township of Wallace.....	do	30,000 00		
Town of Palmerston.....	do	25,000 00		
Township of Minto.....	do	20,000 00		
Town of Harriston.....	do	80,000 00		
Township of Normandy.....	do	65,000 00		
do Bentwick.....	do	20,000 00		
do Brant.....	do	45,000 00		
do Elderslie.....	do	45,000 00		
do Arran.....	do	43,000 00		
do Amabel.....	do	32,000 00		
Township of Kippel.....	do	10,000 00		
do Albermarle.....	do	22,000 00		
Town of Mount Forest.....	do	60,000 00		
Township of Egremont.....	do	877,000 00		
Carried forward.....		2,998,000 00		
				67,500 00

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$	cts.	\$	cts.	\$	cts.
ONTARIO—Continued.							
Township of Glenglg	Brought forward.....			\$ 877,000 00	\$ 2,998,000 00		\$ 67,500 00
Town of Durham.....	Georgian Bay and Lake Erie			20,000 00			
	do			32,000 00			
City of Belleville.....	Grand Junction.....			150,000 00	929,000 00		
Village of Stirling.....	do			5,000 00			
Township of Rawdon.....	do			15,000 00			
do Seymour.....	do			35,000 00			
do Percy.....	do					50,000 00	
do Asphodel.....	do			8,000 00			
City of Guelph.....	Guelph Junction.....	155,000 00	155,000 00		213,000 00		50,000 00
County of Frontenac.....	Kingston and Pembroke.....			170,000 00		20,000 00	20,000 00
City of Kingston.....	do			318,000 00			
Village of Renfrew.....	do			3,000 00			
City of Hamilton.....	Hamilton and North-Western.....			99,733 00	491,000 00		
County of Halton.....	do			75,791 00			
Village of Georgetown.....	do			11,289 00			
County of Peel.....	do			30,974 00			
do Simcoe.....	do			354,007 00			
Town of Collingwood.....	do			12,084 00			
Township of Innisfil.....	do			22,592 00			
do Woodhouse.....	do			20,740 00			
do Adjala.....	do			2,500 00			
do Essa.....	do			2,500 00			
do Tossoronto.....	do			10,000 00			
do Mulmur.....	do			5,000 00			
Village of Alliston.....	do			8,000 00			
City of Hamilton.....	do					100,000 00	100,000 00
Township of Nottawasaga.....	do			20,386 00			
	Lake Erie, Essex & Detroit River				675,596 00		
do South Colchester.....	do			20,000 00			
do Garfield.....	do			15,000 00			
Village of Kingsville.....	do			10,000 00	45,000 00		

*Lake Simcoe Function.					
Township of East Gwillimbury.....	do	do	do	45,000 00	
do North do	do	do	do	20,000 00	
do Georgian do	do	do	do	20,000 00	
do Whitechurch.....	do	do	do	15,000 00	100,000 00
Village of Leamington.....	do	do	do	12,000 00	
Township of Morven.....	do	do	do	15,000 00	
Village of Comber.....	do	do	do	6,000 00	33,000 00
Township of London.....	do	do	do	15,000 00	
do Stephen.....	do	do	do	17,500 00	
do Osborne.....	do	do	do	25,000 00	
do Hay.....	do	do	do	15,000 00	
do Goderich.....	do	do	do	15,000 00	
do E. Wawanosh.....	do	do	do	25,000 00	
do Hallet.....	do	do	do	25,000 00	
do Tuckersmith.....	do	do	do	10,000 00	
do Turnberry.....	do	do	do	5,000 00	
do Morris.....	do	do	do	10,000 00	
do Stanley.....	do	do	do	10,000 00	
Village of Clinton.....	do	do	do	20,000 00	
do Exeter.....	do	do	do	10,000 00	
do Kincardine and Wigan.....	do	do	do	9,000 00	
City of London.....	do	do	do	100,000 00	311,500 00
Township of Thorah.....	do	do	do	50,000 00	
Town of Port Hope.....	do	do	do	30,000 00	
Township of Orillia and Matchedash.....	do	do	do	12,500 00	
Town of Orillia.....	do	do	do	12,500 00	
Township of Tay.....	do	do	do	21,370 85	
Village of Osnensee.....	do	do	do	2,000 00	
Township of Mara.....	do	do	do	12,500 00	
Town of Peterborough.....	do	do	do	4,000 00	144,870 85
do Nanawee.....	do	do	do	30,000 00	
Village of Newburgh.....	do	do	do	7,500 00	
Township of Camden.....	do	do	do	30,000 00	
do Sheffield.....	do	do	do	15,000 00	82,500 00
City of Toronto.....	do	do	do	100,000 00	
County of Simcoe.....	do	do	do	30,000 00	190,000 00
Town of Barrie.....	do	do	do	12,500 00	200,000 00
do Orillia.....	do	do	do		
Townships of Collingwood, Euphrasia and St. Vincent.....	do	do	do	99,480 00	
Town of Smith's Falls.....	do	do	do	25,000 00	241,980 00
do Merrickville.....	do	do	do	10,000 00	
Carried forward.....	do	do	do	155,000 00	390,000 00
					627,500 00

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.		Total.	Bonds.		Total.	Subscriptions to Shares or Bonds.		Total.
		\$	cts.		\$	cts.		\$	cts.	
ONTARIO—Continued.										
Township of West Winchester.....	Brought forward.....									
Town of Simcoe.....	Ontario and Quebec.....									
Township of Charlotteville.....	South Norfolk.....									
do South Walsingham.....	do.....									
City of St. Catharines.....	St. Catharines & Niagara Central	80,000 00								
Town of Thorold.....	do do			80,000 00						
City of Ottawa.....	St. Lawrence and Ottawa.....	200,000 00								
Town of Prescott.....	do do	100,000 00								
do Gananoque.....	Thousand Islands.....			300,000 00						
City of Toronto.....	Toronto and Nipissing.....									
Township of Scarborough.....	do do									
do Markham.....	do do									
do Uxbridge.....	do do									
do Scott.....	do do									
do Brock.....	do do									
do Eldon.....	do do									
do Bexley.....	do do									
do Somerville.....	do do									
Townships of Luxton, Digby and Langford.....	do do									
Town of Uxbridge.....	do do									
Albion.....	Toronto, Grey and Bruce.....									
Caledon.....	do do									
Mono.....	do do									
Amaranth.....	do do									
Arthur.....	do do									
Orangeville.....	do do									
Mount Forest.....	do do									
Toronto.....	do do									
County of Grey (Group).....	do do									

Owen Sound.....	do	do	5,000 00	988,000 00
Minto.....	do	do	15,000 00	
Howick.....	do	do	35,000 00	
Gorrie and Wroxeter.....	do	do	5,000 00	
Teswater.....	do	do	5,000 00	
Culross.....	do	do	38,000 00	186,000 00
Turnbury.....	do	do	5,000 00	
Town of Lindsay.....	Victoria	do	85,000 00	
Village of Fenelon Falls.....	do	do	25,000 00	
Township of Venham and Somerville.....	do	do	22,000 00	
County of Haliburton.....	do	do	54,000 00	682,000 00
Fergus.....	Wellington, Grey and Bruce.	do	10,000 00	
Peel.....	do	do	40,000 00	
Elora.....	do	do	10,000 00	
Maryboro'.....	do	do	40,000 00	
Nichel.....	do	do	10,000 00	
Wallace.....	do	do	35,000 00	
Minto.....	do	do	65,000 00	
Bruce.....	do	do	278,000 00	
Howick.....	do	do	20,000 00	
Listowell.....	do	do	15,000 00	
Grey.....	do	do	35,000 00	
Elma.....	do	do	30,000 00	
St. Morris.....	do	do	30,000 00	
W. Wawanosh.....	do	do	18,000 00	
Ashfield.....	do	do	10,000 00	
Turnbury.....	do	do	28,000 00	
Kincardine.....	do	do	8,000 00	222,094 93
Town of Whitby.....	Whitby, Port Perry and Lindsay.	do	70,000 00	
Township of Whitby.....	do	do	15,000 00	
do Reach.....	do	do	30,000 00	
do Scugog.....	do	do	2,000 00	
County of Victoria.....	do	do	85,000 00	8,957,044 93
Village of Port Perry.....	do	do	20,000 00	
Manufacturing Co.....	do	do	94 93	
585,000 00			717,500 00	
QUEBEC.				35,000 00
Town of Nicolet.....	Drummond County.	do	10,000 00	
Municipality of St. Leonard.....	do	do	5,000 00	
Parish of St. Antoine.....	Great Eastern.	do	10,000 00	
do St. Denis.....	do	do	10,000 00	
Carried forward.....				

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—Continued.

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		£	cts.	£	cts.	£	cts.
Quebec—Continued.							
Parish of Ste. Sophie. Village of New Glasgow.	Brought forward.....						
	Great Northern.....			4,000 00			
	do			2,000 00		225,000 00	
County of Compton.....	International.....			20,000 00			
St. Pie.....	Lake Champlain & St. Lawrence.			10,000 00			
L'Ange Gardien.....	do			6,000 00			
St. Paul.....	do			15,000 00			
Philippsburg.....	do						
St. Ascot.....	Massawippi Valley.....					40,000 00	
St. Hatley.....	do					25,000 00	
Township of Melbourne and Brompton Gore.....	Missisquoi & Black River Valley.					25,000 00	
Township of Ely.....	do					20,000 00	
do North Studley.....	do					20,000 00	
do Bolton.....	do					20,000 00	
Chamblay Canton.....	Montreal & Champlain Junction.			15,000 00			
do Basin.....	Montreal, Portland and Boston.			10,000 00			
	do						
Town of Sorel.....	Montreal and Sorel.....			12,000 00			
Village of Boucherville.....	do			600 00			
do Varennes.....	do			1,000 00			
Parish of St. Roch.....	do			500 00			
County of Pontiac.....	Pontiac and Pacific Junction.....			100,000 00			
Village of Shawville.....	do			1,000 00			
Parish of Sherbrooke.....	Quebec Central.....			50,000 00			
do Dudswell.....	do			25,000 00			
do Weedon.....	do			25,000 00			
Garthby.....	do			3,000 00			
City of Quebec.	Quebec and Lake St. John..					450,000 00	
							450,000 00

No. 10.—STATEMENT of Aid granted to Railways by Municipalities—*Continued.*

Municipalities.	Name of Railway.	Loan.	Total.	Bonus.	Total.	Subscription to Shares or Bonds.	Total.
		\$ cts.	\$ cts.	% cts.	\$ cts.	\$ cts.	\$ cts.
<i>NEW BRUNSWICK—Concluded.</i>							
Parish of St. George	Brought forward				150,000 00		
do Penfield	Grand Southern	2,000 00					
Lepreaux	do	500 00					
	do	500 00	3,000 00				
Town of Port Fairfield	New Brunswick						
do Lynden	do			12,000 00			
	do			11,000 00	23,000 00		
City of Calais	do and Canada			12,500 00			
do Houlton	do			22,000 00			
do St. Stephen	do			13,000 00	47,500 00		
57 Town of Chatham	Northern and Western of New Brunswick	20,000 00	20,000 00	13,000 00	13,000 00	60,000 00	60,000 00
Parish of Elgin	*Petitecodiac and Elgin						
City of St. John	St. John and Maine				233,500 00		60,000 00
<i>NOVA SCOTIA.</i>							
Township of Yarmouth	Western Counties		23,000 00			100,000 00	100,000 00
Counties of Yarmouth and Digby	do				150,000 00		100,000 00
<i>MANITOBA.</i>							
City of Winnipeg	Canadian Pacific				150,000 00		100,000 00
County of Sillkirk							
Township of St. Andrews							
Town of Morris							
County of Westborne	Manitoba and North-Western						
Town of Portage la Prairie							
				200,000 00	370,000 00		
				35,000 00			
				35,000 00			
				100,000 00			
				75,000 00			
				50,000 00			

do. Minnedosa.....				30,000 00	
Municipality of Shual Lake.....				20,000 00	
do. Burle.....				40,000 00	
do. Strathclair.....				600 00	215,600 00
Rapid City.....	Saskatchewan and Western.			10,000 00	10,000 00
British Columbia.					505,600 00
City of New Westminster.....	Canadian Pacific.				57,560 00
North West Territories.					
Not stated.....	Wood Mountain and Qu'Appelle.				35,000 00

Now Elgin, Pettesodice and Havlock.

No. 10.—STATEMENT of Aid granted to Railways—Constructed and under Construction—by Governments and Municipalities,
30th June, 1889—*Concluded.*

SUMMARY.

	Loan.	Total.		Bonds.		Total.		Subscrip- tions to Shares or Bonds.		Total.		Grand Totals.				
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	
<i>Governments.</i>																
Dominion	15,891,533 33			125,812,745 00								141,704,278 33				
Ontario	26,000 00			5,921,007 52								5,947,007 52				
Quebec	3,722,956 00			8,657,319 02								12,380,275 02				
New Brunswick				4,212,165 00				300,000 00				4,512,165 00				
Nova Scotia	50,000 00			2,041,195 87								2,091,195 87				
Manitoba	1,945,000 00			532,250 00								2,477,250 00				
British Columbia				37,500 00								37,500 00				
				21,635,489 33				147,214,182 41				300,000 00			169,149,671 74	
<i>Municipalities.</i>																
Ontario	535,000 00			8,957,041 78								10,209,541 78				
Quebec	2,434,000 00			406,274 00								1,368,000 00				
New Brunswick	23,000 00			233,500 00								60,000 00				
Nova Scotia				130,000 00								100,000 00				
Manitoba				595,600 00												
British Columbia				37,500 00												
North-West Territories				35,000 00												
				2,992,000 00				10,414,915 78				2,245,500 00			15,652,415 78	
				24,627,489 33				157,629,098 19				2,545,500 00			184,802,087 52	

SUPPLEMENT No. 1

TO THE

ANNUAL REPORT OF THE DEPARTMENT OF RAILWAYS AND CANALS

For the Year ended 30th June, 1889.

CANAL STATISTICS

FOR

SEASON OF NAVIGATION

1889.



OTTAWA:

PRINTED BY BROWN CHAMBERLIN, PRINTER TO THE QUEEN'S MOST
EXCELLENT MAJESTY.

1890.

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ERRATUM.

On page 5, "St. Lawrence Canals from Montreal" read "St. Lawrence Canals to Montreal."

SUPPLEMENT

TO THE

ANNUAL REPORT OF THE DEPARTMENT OF RAILWAYS & CANALS.

DEPARTMENT OF RAILWAYS AND CANALS,
CANALS REVENUE BRANCH,
OTTAWA, 19th May, 1890.

SIR,—I have the honour to submit herewith my report on the Canal Statistics for the season of 1889.

The statistics for the season of 1888 are printed with the Annual Report of the Department, and comparing them with those now submitted it will be seen that the aggregate revenue has increased for 1889 to the extent of \$59,675.38.

The several increases and decreases are as follows:—

	Increase.	Decrease.
On the Welland Canal.....	\$52,105 59	
“ St. Lawrence Canals.....	2,059 10	
“ Chambly Canal.....		1,566 10
“ Rideau Canal.....	520 41	
“ Ottawa Canals....	5,606 12	
“ St. Peter's Canal.....	715 10	
“ Trent Valley Canals.....	235 16	
Total.....	\$61,241 48	\$1,556 10
Total increase.....	\$59,675 38	

These figures, however, are somewhat changed by refunds under Order in Council hereinafter referred to.

There was refunded on grain in 1888 tolls to the amount of \$30,580.02, and in 1889 \$48,725.80, which makes the actual increase of revenue for 1889 \$41,529.60.

In compliance with the renewed request of the forwarders and shippers of Montreal for a continuance of the reduction of tolls on grain, His Excellency the Governor-General, on the 18th March, 1889, authorized a reduction of tolls to two (2) cents per ton on grain passing down the Welland and St. Lawrence Canals to Montreal or ports east of that point for the season of 1889, and no longer.

The full amount of tolls on the Welland Canal was collected, and a refund of 18 cents per ton was made on proof of the delivery of the grain at Montreal.

The quantity of barley, corn, oats, pease, rye and wheat passed down the Welland Canal from United States ports to United States ports for a period of ten years upon which there was no reduction of tolls, is as follows :—

	Tons.		Tons.
For 1880.....	47,029	For 1885.....	117,346
1881.....	64,351	1886.....	151,551
1882.....	63,881	1887.....	134,868
1883.....	121,876	1888.....	169,664
1884.....	104,537	1889.....	213,766

The quantity of these articles passed down the Welland and St. Lawrence Canals from ports west of Port Colborne to Montreal for the same period is as follows :—

	Tons.		Tons.
For 1880.....	333,806	For 1885.....	96,569
1881.....	146,127	1886.....	203,940
1882.....	180,694	1887.....	185,034
1883.....	186,814	1888.....	160,358
* 1884.....	142,194	1889.....	267,769

*A refund of 10 cents per ton was allowed on grain passed down the Welland and St. Lawrence Canals to Montreal for 1884 and to June, 1885, and 18 cents per ton from 1st July, 1885, to December, 1889.

It will be seen by the above figures that the movement of grain through the canals in 1889 was the largest for any one year since 1880.

The quantity passed down the Welland Canal from United States ports to United States ports (Ogdensburg, Oswego, &c.) shows an increase of 44,102 tons as compared with the previous year, and an increase of 166,737 tons compared with 1880.

The quantity passed from Lake Erie down to Montreal shows an increase of 107,411 tons compared with the previous year, and a decrease of 66,037 tons compared with 1880.

The quantity of grain passed down the Welland Canal in Canadian and United States vessels to Kingston for four years is as follows :—

In Canadian vessels, there were in—

	Tons.
1886, 244 cargoes, with an aggregate quantity of.....	143,330
1887, 284 do do	178,233
1888, 182 do do	143,025
1889, 208 do do	165,117
	=====

In United States vessels, there were in—

	Tons.
1886, 97 cargoes, with an aggregate quantity of.....	62,222
1887, 19 do do	12,477
1888, 60 do do	43,667
1889, 114 do do	108,358
	=====

Four Canadian vessels took their cargoes of 1,544 tons of grain through to Montreal intact in 1887, against two in 1888 of 1,064 tons, and one in 1889 of 425 tons.

Sixty Canadian vessels lightened their cargoes at Kingston in 1887, against 39 in 1888 and 54 in 1889; 244 vessels discharged the whole of their cargoes at Kingston in 1887, against 201 in 1888 and 267 in 1889.

9. The total quantity of freight passed eastward and westward through the Welland Canal, from United States ports to United States ports, for a period of nine years, is as follows:—

	Eastward, Tons.	Westward, Tons.
1881	96,266	97,907
1882	110,286	172,520
1883	174,912	257,699
1884.....	163,998	243,081
1885	168,212	216,297
1886	244,916	239,562
1887	189,427	151,074
1888	221,062	213,689
1889	297,353	266,231

It will thus be seen, that the quantity of freight from United States ports to United States ports, by the Welland route, is steadily increasing, having increased from 96,266 tons, eastward, in 1881, to 297,353 tons in 1889; and there is also a very marked increase in the quantity passed westward.

The total quantity of freight passed eastward and westward through the Welland and St. Lawrence Canals, from Lake Erie to Montreal, during the same period, is as follows:—

	* Eastward, Tons.	† Westwards, Tons.
1881.....	169,213	37,190
1882.....	198,835	24,488
1883.....	205,394	27,488
1884.....	168,715	9,425
1885.....	132,968	16,115
1886.....	244,514	16,801
1887.....	213,834	14,075
1888.....	183,899	19,310
1889.....	298,197	25,370

The quantity of barley, corn, oats, pease, rye and wheat arriving at Montreal *via* Grand Trunk and Canadian Pacific Railways, for a period of 8 years, is reported as follows:—

	Tons.		Tons.
For 1882.....	75,026	For 1886.....	165,613
1883.....	98,672	1887.....	191,760
1884.....	142,231	1888.....	113,794
1885.....	160,821	1889.....	94,943

* Allowed to pass through the St. Lawrence Canals free, per Order in Council, 21st April, 1881, and a refund of 18 cents per ton of Welland Canal tolls on grain for 1885, 1886, 1887, 1888 and 1889.

† Allowed to pass through the Welland Canal free, per Order in Council 21st April, 1881.

The quantity of the same articles passed down the whole length of the St. Lawrence Canals to Montreal, for the same period, being:—

	Tons.		Tons.
For 1882.....	230,055	For 1886.....	272,133
1883.....	263,368	1887.....	237,881
1884.....	174,496	1888.....	166,191
1885.....	134,824	1889.....	275,414

The quantity of corn passed down the Welland and St. Lawrence Canals from Lake Erie to Montreal, for the seasons of—

	Tons.
1888, was	66,443
1889, was	195,350
Showing an increase of.....	128,907

The quantity of corn carried on the New York canals is reported as follows:—

	Tons.
For 1888	499,218
1889	592,550
Showing an increase of.....	93,332

The quantity of wheat passed down the Welland and St. Lawrence Canals from Lake Erie to Montreal was—

	Tons.
For 1888	93,915
1889	70,815
Showing a decrease of	23,100

The quantity of wheat carried by the New York canals is reported as follows:—

	Tons.
For 1888	491,419
1889	484,141
Showing a decrease of	7,278

The total quantity of grain carried on the New York railways was reported as follows:—

	Tons.
For 1888.....	2,151,749
1889.....	2,481,501
Showing an increase of.....	329,752

The total quantity of grain carried to tide-water by the New York canals is reported as follows:—

	Tons.
For 1888.....	1,114,574
1889.....	1,242,804
Showing an increase of.....	128,230

The quantity of grain passed down the St. Lawrence Canals from Montreal is as follows :—

	Tons.
For 1888	166,191
1889	275,414
Showing an increase of	109,223

The total quantity of grain carried by the Canadian Pacific and Grand Trunk Railways to Montreal, the only Atlantic seaport for which we have been able to get the figures, is reported as follows :—

	Tons.
For 1888	113,794
1889	94,943
Showing a decrease of	18,851

The increases and decreases for 1889, as compared with 1888, on the several routes competing for the carrying trade to the seaboard, is as follows :—

	Increase.	Decrease.	Increase.	Decrease.
	Tons.	Tons.	Per cent.	Per cent.
On the St. Lawrence Canals	109,223		65·75	
do Canadian Pacific and Grand Trunk Railways		18,851		16·56
do New York canals	128,230		11·50	
do New York railways	329,752		15·32	

The quantity of grain transhipped at Port Colborne in 1889 and the three previous years is given below.

The total number of grain-laden vessels lightened at this Port in 1889 was 47, against 23 in the previous year.

The number unladen without entering the Canal was 3 against 3 in 1888.

The quantity of the grain lightered was as follows :—

	1886.	1887.	1888.	1889.
	Centals.	Centals.	Centals.	Centals.
Wheat	96,871	5,031	6,864	22,333
Corn	511,735	147,435	74,488	142,626
Barley	Nil.	Nil.	Nil.	Nil.
Oats	do.	do.	do.	2,894

The quantity discharged in this Port from vessels which did not enter the canal was follows:—

	1886.	1887.	1888.	1889.
	Centals.	Centals.	Centals.	Centals.
Wheat	Nil.	Nil.	43,555	5,165
Corn	do.	do.	13,202	Nil.
Barley	do.	do.	Nil.	do.
Oats	do.	do.	do.	do.

Forty-one United States vessels passed down the Welland Canal during 1889, with an average cargo of 47,724 bushels of grain. See Appendix J.

The quantity of oats passed down the Welland Canal, from United States ports to United States ports (Oswego, Ogdensburgh) for a series of years, is as follows:—

	Bushels.	Tons.
For 1884.....	574,643	or 9,769
1885.....	51,882	882
1886.....	281,761	4,790
1887.....	708,823	12,050
1888.....	1,559,411	2,660
1889	1,617,176	27,492

The total quantity arrived at Montreal by canal for the same period is as follows:—

	Bushels.	Tons.
For 1884.....	297,326	or 5,054
1885.....	678,866	11,540
1886.....	650,910	11,365
1887.....	341,568	5,806
1888.....	123,213	2,094
1889.....	119,958	2,039

It will thus be seen that while the quantity to the United States ports increased from 574,643 bushels in 1884 to 1,617,176 bushels in 1889, or an increase of 1,042,533 bushels, the quantity to Montreal by canal decreased from 297,326 bushels to 119,958 bushels in 1889, or a decrease of 177,368 bushels.

By reference to Appendix R it will be seen that the total quantity of oats arrived at Montreal by canal and rail for 1889 was 932,708 bushels, and the shipments were only 88,910 bushels.

There was a large increase in the quantity of coal passed through the Welland Canal for the season of 1889.

For comparative statements for five years, see Appendix S.

The quantity for 1889 is as follows :—

WESTWARD.

	Tons.	Tolls.
To United States ports	226,353	\$45,270 40
Canadian do	12,036	2,407 20
Total	<u>238,388</u>	<u>\$47,677 60</u>

Carried as follows :—

In United States vessels	227,125	\$45,425 00
Canadian do	11,263	2,252 60
Total	<u>238,388</u>	<u>\$47,677 60</u>

EASTWARD.

	Tons.	Tolls.
To United States ports.....	1,124	\$ 224 80
Canadian do	25,931	5,186 20
Total.....	<u>27,055</u>	<u>\$ 5,411 00</u>

Carried as follows :—

In United States vessels.....	2,376	\$ 475 20
Canadian do	24,679	4,935 80
Total.....	<u>27,055</u>	<u>\$ 5,411 00</u>

The total quantity of coal passed through the Welland Canal for 1889 is as follows :—

EASTWARD AND WESTWARD.

	Tons.	Tolls.
To United States ports.....	227,476	\$45,495 20
Canadian do	37,969	7,593 40
Total.....	<u>265,443</u>	<u>\$53,088 60</u>

Carried as follows :—

In United States vessels	229,501	\$45,900 20
Canadian do	35,942	7,188 40
Total	<u>265,443</u>	<u>\$53,088 60</u>

By reference to Appendix U it will be seen that the quantity of freight from ports west of Port Colborne to United States ports on the south of Lake Ontario has increased from 175,455 tons in 1883 to 297,353 tons in 1889, and the quantity to Ontario ports between Port Dalhousie and Cornwall has decreased from 184,502

tons in 1883 to 146,167 in 1889, and the quantity passed down from Montreal has increased from 205,394 tons in 1883 to 292,827 in 1889.

The statistical comparisons heretofore given in respect of the quantities of the principle articles carried through the Welland Canal, and those carried over routes in the United States, in competition with that work, have been continued to date.

On reference to the returns made by the railways to the State authorities of New York, and to the canal statistics submitted to the State Legislature, I find that of the total tonnage of freight carried by the canals and railways the State canals carried—

	Per cent.		Per cent.
In 1859.....	68·9	In 1879.....	23·7
1869.....	47·0	1880.....	25·1
1870.....	38·9	1881.....	18·5
1871.....	38·9	1882.....	19·0
1872.....	40·1	1883.....	18·7
1873.....	34·9	1884.....	19·0
1874.....	31·7	1885.....	17·1
1875.....	28·4	1886.....	16·9
1876.....	24·6	1887.....	16·3
1877.....	28·3	1888.....	18·8
1878.....	27·1	1889.....	11·1

The quantity of freight carried by the canals and railways was greater in 1889 by 3,951,063 tons than the quantity carried in 1888, and an increase of 17,742,499 tons over 1869.

The proportion carried by canals was less than any previous year.

The quantities carried were as follows:—

	Total Tonnage.	Proportion by Canals.
In 1859.....	5,485,076	·6890
1869.....	12,453,174	·4705
1870.....	15,148,274	·3895
1871.....	15,844,152	·3896
1872.....	16,631,609	·4012
1873.....	18,200,208	·3497
1874.....	18,283,547	·3174
1875.....	17,101,758	·2841
1876.....	16,948,627	·2462
1877.....	17,489,770	·2833
1878.....	19,017,301	·2719
1879.....	22,590,766	·2373
1880.....	25,706,586	·2512
1881.....	27,857,394	·1859
1882.....	28,693,054	·1905
1883.....	30,167,119	·1877

	Total Tonnage.	Proportion by Canals.
1884.....	26,293,844	·1905
1885.....	27,543,948	·1718
1886.....	31,168,744	·1698
1887.....	34,029,791	·1632
1888.....	26,244,610	·1883
1889.....	30,195,673	·1116

By reference to Statement H as to the quantity of vegetable food carried to tide-water, it will be observed that the quantity carried by the New York canals was 1,296,896 in 1889, as against 1,166,958 tons in 1888 and 2,371,090 in 1880.

The quantities of vegetable food carried by the New York Central, Erie and New York, West Shore and Buffalo Railways being:—

In 1889.....	{ 3,654,984	In 1884.....	3,639,805
1888.....*	{ 3,197,634	1883.....	4,422,461
1887.....	{ 3,847,766	1882.....	3,888,557
1886.....	{ 3,802,262	1880.....	4,732,385
1885.....	{ 4,105,594	1869.....	1,087,809

The following figures are an abstract of the quantities of vegetable food carried to tide-water by the canals and railways of the State of New York, during twenty-one years:—

—	Canals.	Railways.	Total.	Proportions by Canals.
1869.....	1,302,613	1,087,809	2,390,422	·545
1870.....	1,295,010	1,766,457	3,061,467	·423
1871.....	1,850,198	2,205,589	4,055,787	·456
1872.....	1,674,320	1,870,614	3,544,934	·472
1873.....	1,745,171	2,036,992	3,782,163	·461
1874.....	1,767,598	2,791,517	4,559,115	·387
1875.....	1,305,550	2,343,241	3,648,791	·357
1876.....	1,064,293	2,875,803	3,940,096	·270
1877.....	1,498,984	2,493,683	3,992,667	·375
1878.....	1,912,734	3,695,764	5,608,498	·341
1879.....	1,833,399	4,353,617	6,187,016	·296
1880.....	2,371,090	4,732,385	7,103,475	·333
1881.....	1,116,561	4,983,722	6,100,283	·183
1882.....	1,118,776	3,885,557	5,004,333	·223
1883.....	1,379,000	4,422,461	5,801,461	·237
1884.....	1,236,986	3,639,805	4,876,791	·253
1885.....	1,063,310	4,105,594	5,168,904	·205
1886.....	1,489,886	3,802,262	5,292,148	·281
1887.....	1,539,403	3,847,766	5,387,169	·285
1888.....	1,166,958	3,197,734	4,364,692	·267
1889.....	1,296,896	3,654,984	4,951,880	·262

* Flour and grain only.

The Canadian Pacific and Canada Atlantic Railways have become formidable competitors to the Ottawa Canals for the carrying of lumber from the Ottawa district.

The quantity carried from Ottawa and Hull by these two railways for 1888 and 1889 is reported as follows:--

	1888.	1889.
Sawn Lumber, feet B.M.....	119,304,517	125,937,719
Shingles	50,000	.....

Quantity carried by the Ottawa Canals for the same period is as follows:—

Sawn Lumber, feet B. M.....	319,923,600	368,910,600
Shingles	5,028,000	5,184,000

I have the honor to be, Sir,

Your obedient servant,

B. H. TEAKLES,

Chief Clerk Canals Revenue.

A. P. BRADLEY, Esq.,

Secretary Department Railways and Canals,

Ottawa.

TABLES

SHOWING THE

TONNAGE ON THE CANALS.

C.—TABLE showing the Tonnage of the undermentioned Articles, moved

Years.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Vegetable Food.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869.....	71,051	670,534	256,475	99,012	92,309	13,489	99,743
1870.....	54,978	658,524	193,129	123,191	117,941	19,520	127,727
1871.....	41,211	748,549	672,057	113,992	129,891	34,563	109,935
1872.....	20,534	403,903	902,753	120,061	92,959	13,357	120,753
1873.....	19,307	803,064	637,296	70,586	70,023	30,160	114,735
1874.....	29,134	772,163	519,203	98,654	59,408	8,215	280,821
1875.....	17,635	744,293	282,031	104,475	62,717	8,309	86,090
1876.....	9,290	416,376	365,254	96,491	52,147	19,949	104,783
1877.....	8,923	448,043	723,458	139,453	66,045	35,948	77,114
1878.....	5,904	844,555	734,993	89,534	85,029	64,613	88,106
1879.....	7,164	949,466	621,180	96,144	23,164	59,210	77,071
1880.....	8,266	966,052	1,156,619	106,247	20,893	26,340	86,673
1881.....	6,926	444,832	475,823	81,587	30,321	15,484	61,588
1882.....	9,372	642,215	251,687	96,650	22,180	43,372	53,300
1883.....	9,047	573,740	522,978	58,787	51,607	95,246	67,595
1884.....	7,251	790,409	198,216	65,008	52,696	71,462	51,944
1885.....	6,869	565,922	359,982	64,587	8,234	10,211	47,505
1886.....	9,005	993,129	354,765	62,854	7,278	3,073	59,782
1887.....	4,089	936,840	446,617	75,458	35,365	6,717	47,678
1888.....	3,287	491,419	499,218	41,100	70,315	12,532	49,087
1889.....	4,429	484,141	592,550	66,110	63,674	36,329	49,663

on all Canals in the State of New York, during a series of twenty-one Years.

HEAVY GOODS.						
Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1,302,613	137,677	79,652	263,333	1,324,408	183,992	1,989,062
1,295,010	135,930	89,708	266,740	1,558,185	238,802	2,289,395
1,850,198	178,269	100,310	248,709	1,194,037	289,952	2,011,277
1,674,320	161,667	96,996	248,558	1,462,590	377,592	2,347,403
1,745,171	53,363	62,581	216,706	1,625,859	415,968	2,374,477
1,767,598	24,511	82,955	173,590	1,413,162	232,544	1,926,762
1,305,550	36,603	95,305	186,785	1,217,091	283,219	1,819,003
1,064,293	11,691	69,450	114,070	1,036,698	173,530	1,405,439
1,498,984	10,341	58,828	156,918	1,286,881	250,573	1,763,541
1,912,734	8,385	65,642	139,927	889,873	210,078	1,313,905
1,833,399	27,634	99,568	136,021	971,074	314,411	1,548,708
2,371,090	94,613	139,993	144,487	959,342	370,884	1,709,319
1,116,561	78,650	205,005	113,756	1,092,003	337,873	1,827,287
1,118,776	58,921	122,786	108,040	1,228,435	364,361	1,882,543
1,379,000	46,553	47,412	190,392	1,152,849	293,892	1,731,098
1,236,986	28,513	54,471	161,788	954,288	201,610	1,400,670
1,063,310	12,215	38,726	161,272	1,025,941	195,750	1,433,904
1,489,886	10,878	152,030	112,002	857,884	269,914	1,402,708
1,552,764	21,368	224,979	124,054	905,424	243,578	1,539,403
1,166,958	2,596	43,881	106,344	1,219,680	259,269	1,631,770
1,296,896	3,278	78,135	112,100	1,094,897	234,948	1,523,358

D.—TABLE showing the Tonnage of the undermentioned Articles, moved
December,

YEAR.	VEGETABLE FOOD.						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*	45,674	313,825	120,569	20,951	.....	904	1,937
1872.....	26,651	239,998	254,902	6,035	7,752	64	2,745
1873.....	30,665	355,847	180,169	8,225	1,194	3	3,777
1874.....	24,019	413,212	181,151	18,871	5,954	513	8,677
1875.....	13,964	253,835	103,749	35,751	3,383	917	6,337
1876.....	15,778	201,906	144,501	18,455	24,496	1,454	3,198
1877.....	13,558	253,953	169,196	19,870	2,810	2,439	2,355
1878.....	9,121	191,982	185,931	10,979	3,088	.....	2,302
1879.....	10,710	274,570	144,506	4,655	1,239	440	2,444
1880.....	12,679	245,020	163,738	17,772	477	1,016	1,480
1881.....	9,959	127,832	101,075	24,599	.....	1,844	2,086
1882.....	12,261	215,056	54,799	20,126	611	3,226	403
1883.....	13,471	152,794	182,269	10,436	731	1,642	10,983
1884.....	13,683	144,851	118,811	7,155	10,746	1,320	9,168
1885.....	13,334	124,206	117,536	15,801	1,116	.....	1,912
1886.....	19,474	154,169	219,442	1,595	4,911	564	14,657
1887.....	23,949	221,927	114,938	9,574	12,050	.....	12,533
1888.....	16,983	160,963	194,886	5,906	26,629	811	13,608
1889.....	7,931	126,664	353,595	4,272	28,356	2,673	18,552

* Fiscal.

through the Welland Canal, during a series of Nineteen Years ended 31st 1889.

HEAVY GOODS.							
Total.	Railway Iron.	Other Iron.	Salt.	Iron and Salt having paid full Tolls on St. Lawrence Canals.	Coal.	Ores.	Total.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
503,860	68,064	16,924	91,575	37,153	103,126	58,781	275,623
538,147	26,217	17,141	50,540	44,243	186,932	98,605	423,678
579,880	6,923	20,754	40,850	17,157	339,016	118,685	543,387
647,397	6,032	12,068	23,309	9,579	323,503	56,825	431,316
417,936	1,517	7,588	13,509	9,962	321,306	43,683	397,565
409,788	51	7,997	30,300	20,327	288,211	31,654	378,540
464,181	9,630	9,696	9,173	3,983	323,869	42,758	399,109
403,403	10	11,518	3,980	12,686	295,318	15,229	338,741
438,564	2,782	5,797	7,174	17,796	192,957	19,164	245,670
442,182	5,360	4,812	413	22,273	109,986	34,139	176,983
269,395	4,585	7,013	10	30,682	128,113	18,785	189,188
306,482	.....	5,348	50	17,327	237,559	23,700	283,984
373,326	1,237	7,922	66	17,037	307,058	31,785	365,105
305,734	698	652	461	3,242	274,471	53,205	332,729
273,905	78	2,055	597	14,243	248,272	26,728	291,973
414,812	166	6,123	48	12,324	271,356	27,447	317,464
394,971	1,351	5,636	.....	6,715	145,193	13,866	172,761
419,786	93	3,220	316	13,617	223,871	16,872	257,989
542,043	47	2,479	1,254	20,269	268,305	2,435	294,789

E—TABLE showing the Tonnage of the undermentioned Articles cleared at Buffalo and Tonawanda, for transit through the Erie Canal, for a series of twenty-one years.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.....	5,609	490,904	219,874	1,978	63,728	2,150	2,193	786,436	.....
1870.....	8,258	502,158	165,577	19,944	89,156	10,593	6,906	802,592	2·05.....	
1871.....	5,607	570,849	579,709	19,810	106,391	27,622	5,705	1,315,693	67·59.....	
1872.....	.....	330,032	866,169	41,515	73,572	5,900	88	1,317,276	67·50.....	
1873.....	6	737,167	611,675	8,636	51,615	22,441	634	1,432,174	82·10.....	
1874.....	.....	650,161	459,728	3,192	44,079	112	237	1,157,509	47·18.....	
1875.....	5,859	695,315	273,006	1,156	36,609	2,242	3,372	1,017,559	29·38.....	
1876.....	231	377,317	356,064	6,334	26,488	12,205	4,691	783,331	.....	0·39
1877.....	1,710	398,416	709,723	26,351	52,559	27,365	4,976	1,223,100	55·52.....	
1878.....	987	775,953	718,714	21,665	69,256	51,064	6,662	1,644,301	109·08.....	
1879.....	1,239	892,404	602,171	7,193	14,537	40,471	7,528	1,565,543	99·07.....	
1880.....	2,743	897,603	131,857	434	16,154	12,137	4,256	2,065,184	162·06.....	
1881.....	1,491	386,605	458,318	86	24,751	107	7,484	878,842	11·75.....	
1882.....	1,123	586,019	241,406	1,858	9,046	19,158	6,216	864,826	9·96.....	
1883.....	538	535,150	517,219	6,816	47,190	79,010	6,051	1,191,974	51·06.....	
1884.....	520	767,784	194,368	4,910	47,060	57,856	4,411	1,078,909	37·18.....	
1885.....	323	540,533	356,737	3,317	5,610	6,405	5,427	918,352	14·36.....	
1886.....	488	955,851	351,272	6,799	5,180	.....	4,001	1,353,591	72·11.....	
1887.....	334	914,152	438,069	15,207	32,907	4,612	44,693	1,449,984	85·64.....	
1888.....	534	469,965	494,110	6,589	68,922	10,997	1,717	1,052,834	33·87.....	
1889.....	845	457,922	579,526	16,380	61,175	34,167	5,160	1,155,175	46·88.....	

SUPPLEMENT to Table E showing the Shipments at Oswego during the same period.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles	Total.	Increase.	Decrease.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.		
1869.....	7,361	141,360	28,585	66,794	1,113	8,569	14,033	267,815	.....	.....
1870.....	11,440	115,732	10,120	77,906	3,953	7,402	11,628	238,181	.....	11·06
1871.....	10,043	123,173	70,218	72,675	1,806	6,250	13,259	297,424	11·05	.....
1872.....	4,773	57,865	27,148	62,172	684	6,751	10,425	169,818	.....	36·59
1873.....	4,061	53,361	10,578	46,337	670	6,019	10,739	131,765	.....	50·80
1874.....	.....	108,288	46,127	77,007	1,103	7,053	3,747	243,325	.....	9·14
1875.....	1,728	32,690	3,034	75,083	3,308	4,989	5,931	126,763	.....	52·67
1876.....	967	21,890	1,324	63,336	117	5,703	6,638	99,975	.....	62·67
1877.....	855	28,955	3,308	80,306	316	6,603	6,556	126,899	.....	52·61
1878.....	1,394	24,171	1,383	50,381	.....	10,598	5,222	93,149	.....	65·21
1879.....	734	25,740	9,268	71,693	.....	16,623	3,110	127,168	.....	52·51
1880.....	951	17,466	15,656	82,743	.....	12,598	5,996	135,410	.....	49·43
1881.....	758	25,352	8,064	62,793	200	14,444	4,027	115,638	.....	56·82
1882.....	813	20,274	4,401	70,862	416	22,265	7,773	126,804	.....	52·65
1883.....	432	22,634	535	32,557	.....	14,384	1,967	72,507	.....	73·00
1884.....	404	5,932	413	48,391	.....	12,173	2,819	70,132	.....	73·43
1885.....	519	6,484	22	45,264	.....	4,613	2,945	59,847	.....	77·62
1886.....	737	9,579	154	42,261	.....	1,671	4,814	59,216	.....	77·88
1887.....	790	675	2	44,580	.....	716	1,370	48,133	.....	82·02
1888.....	384	2,206	168	6,237	.....	.....	2,196	11,191	.....	95·82
1889.....	473	8,002	8,950	40,096	16	1,405	1,003	59,945	.....	77·61

F.—TABLE showing the Tonnage of the undermentioned Articles cleared downward on the Welland Canal, during a series of nineteen years, ended 31st December, 1889.

VEGETABLE FOOD.

Year.	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	44,110	310,090	119,541	3,920	.....	680	1,541	479,882
1872.....	26,648	231,056	254,534	2,693	7,594	64	2,300	524,889
1873..	30,660	345,720	180,042	2,643	1,188	3	3,557	563,813
1874.....	24,017	406,157	181,128	377	5,953	.....	3,301	620,933
1875.....	13,930	248,555	103,477	813	3,383	500	4,304	374,962
1876.....	15,735	194,559	144,501	1,110	24,496	1,454	2,949	384,807
1877.....	13,588	248,894	100,185	10,216	2,810	2,405	1,833	448,931
1878.....	8,854	188,106	185,931	1,217	3,088	.....	2,100	389,296
1879.....	10,588	271,545	144,276	803	1,196	.....	2,387	430,795
1880.....	12,467	240,601	162,891	.....	477	.....	1,418	417,853
1881.....	9,655	121,393	103,075	252	.....	6	1,371	235,752
1882.....	12,205	205,876	54,797	537	.....	1,954	225	275,594
1883.....	13,256	146,741	182,143	975	731	518	10,971	355,335
1884.....	13,626	135,804	118,811	270	10,746	477	9,018	288,752
1885.....	13,322	114,090	117,536	618	1,116	.....	1,628	248,310
1886.....	19,418	146,151	218,897	.....	4,891	.....	14,571	403,928
1887.....	23,940	210,755	114,938	1,711	12,050	.....	12,149	375,543
1888.....	16,973	150,833	194,886	555	26,629	811	13,358	404,045
1889.....	7,922	120,498	353,595	197	28,356	1,918	18,273	530,759

* Fiscal.

G.—TABLE showing the Tonnage of the undermentioned Articles passed through the Welland Canal in transit between Ports in the United States during a series of Nineteen years, ended 31st December, 1889.

Year.	VEGETABLE FOOD.							HEAVY GOODS						
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	Other Articles.	Total.	Railway Iron.	Other Iron.	Salt.	Coal.	Ores.	Total.
1869*	Tons. 30,681	Tons. 211,085	Tons. 91,149	Tons. 2,942	Tons.	Tons. 667	Tons. 1,006	Tons. 337,530	Tons. 68,064	Tons. 14,334	Tons. 89,086	Tons. 28,566	Tons. 35,912	Tons. 235,962
1872.	10,482	124,695	89,761	1,391	7,400	.....	608	234,337	24,040	13,239	49,843	95,741	59,401	242,264
1873.	10,805	127,727	101,329	1,920	1,188	3	392	243,366	4,659	13,826	40,507	170,242	62,942	292,176
1874.	8,230	229,053	125,627	.....	5,948	.....	5,368	374,226	5,742	8,941	22,888	203,673	19,651	260,895
1875.	1,881	113,832	54,188	2,641	2,946	500	1,920	177,908	14	4,123	12,931	192,767	34,616	244,451
1876.	5,187	96,247	58,138	.....	1,905	525	403	162,405	.....	5,531	29,395	167,110	25,808	227,844
1877.	3,342	107,396	65,260	1,603	2,314	258	413	180,586	8,976	8,688	8,336	172,868	41,107	239,975
1878.	1,316	65,542	60,026	859	277	.....	341	128,361	.....	10,713	3,892	150,583	13,535	178,723
1879.	159	53,791	33,401	.....	464	.....	11	87,826	2,405	3,648	6,318	118,573	17,797	148,741
1880.	.....	30,611	16,122	1,551	296	.....	.....	48,580	4,743	3,515	371	65,945	18,380	92,954
1881.	.....	34,320	30,031	924	.....	.....	10	65,285	1,313	5,570	.....	83,858	6,464	97,205
1882.	107	30,227	32,433	537	.....	684	14	64,002	.....	4,076	.....	158,552	14,533	177,161
1883.	2,041	54,382	66,128	735	731	.....	8,579	132,496	1,209	6,901	8	196,462	24,891	229,471
1884.	1,715	40,956	53,707	.....	9,874	.....	8,170	114,422	698	599	.....	210,790	15,100	227,187
1885.	124	53,235	63,229	732	882	.....	1	118,203	.....	1,594	.....	198,416	15,029	215,039
1886.	7,591	53,258	94,048	.....	4,730	.....	13,201	172,888	156	5,328	1	189,964	11,364	206,813
1887.	11,780	37,678	83,431	1,732	12,050	.....	10,859	157,530	15	4,406	.....	82,780	627	87,828
1888.	8,563	39,999	102,974	2	26,510	179	11,598	189,825	63	1,601	56	173,259	2,309	177,288
1889.	5,017	39,229	147,045	.....	27,492	.....	17,225	236,208	.....	1,587	896	227,476	1,204	231,163

* Fiscal.

H.—TABLE showing the Tonnage of Vegetable Food carried on each of the Lines of Canals, and the two principal railways, Competing for the Carrying Trade between Lake Erie and Tidewater, for a series of Nineteen Years, ended 31st December, 1889.

Year.	Total on New York Canals.	Total on Welland Canal.	Total on New York Central and Erie Railways.	Quantity cleared at Buffalo and Tonawanda by Erie Canal.	Quantity cleared at Oswego by Canal.	Quantity cleared through the Welland Canal in transit between ports in the United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1869*.....	1,302,613	503,860	1,087,809	786,436	267,815	337,530
1872.....	1,674,320	538,147	1,870,614	1,317,276	169,818	234,337
1873.....	1,745,171	579,880	2,036,992	1,432,174	131,765	243,366
1874.....	1,767,598	647,397	2,791,517	1,157,509	243,325	374,226
1875.....	1,305,550	417,936	2,343,241	1,017,559	126,763	177,908
1876.....	1,064,293	409,788	2,875,803	783,331	99,975	162,405
1877.....	1,408,984	464,181	2,493,683	1,223,100	126,899	180,586
1878.....	1,912,734	403,403	3,695,764	1,644,301	93,149	128,361
1879.....	1,833,399	438,564	4,353,617	1,565,543	127,168	87,826
1880.....	2,371,090	442,182	4,732,385	2,065,184	135,410	48,580
1881.....	1,116,561	269,395	4,983,722	878,842	115,638	65,285
1882.....	1,118,776	306,482	3,885,557	864,826	126,804	64,002
1883.....	1,379,000	372,236	4,422,461	1,191,974	72,507	132,496
1884.....	1,236,986	305,734	3,639,805	1,078,909	70,132	114,422
1885.....	1,063,310	273,905	4,105,594	918,352	59,847	118,203
1886.....	1,489,886	414,812	3,802,262	1,353,591	59,216	172,888
1887.....	1,552,764	394,971	3,847,766	1,449,984	48,133	157,530
1888.....	1,166,958	419,786	3,197,734	1,052,834	11,191	189,825
1889.....	1,296,896	542,043	3,654,984	1,155,175	59,945	236,208

* Fiscal.

I.—STATEMENT showing the Quantity of Freight passed down the Welland Canal in Canadian and United States Vessels entering the Canal at Port Colborne during the Seasons of Navigation, in 1882, 1883, 1884, 1885, 1886, 1887, 1888 and 1889.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	174	62,665	432	121,150	41	17,482	329	97,257	976	298,554
	Tons.		Tons.		Tons.		Tons.		Tons.	
1882.										
Wheat.....		60,535		46,201		5,203		87,213		199,152
Corn.....		7,431		6,075		3,468		38,360		55,334
Rye.....								1,954		1,954
Coal.....		1,673		51,127		112		27,968		80,880
Miscellaneous merchandise		2,939		3,744		1,553		2,605		10,841
Lumber.....Ft. B.M.		1,021,957		1,943,568		3,969,790		17,327,483		24,262,798
Timber.....Cub. ft.		125,960		2,874,066				13,500		3,013,526
Staves.....No.		59,600		1,065,233				104,000		1,228,833
1883.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	180	68,850	468	130,844	111	68,609	417	127,616	1176	395,929
	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....		32,761		29,385		5,928		76,715		144,789
Corn.....		25,651		21,073		36,146		99,272		182,142
Barley.....								735		735
Rye.....								518		518
Oats.....						731				731
Coal.....		8,398		48,329		835		40,388		97,950
Miscellaneous merchandise		5,238		3,590		13,195		2,299		24,322
Lumber.....Ft. B.M.		2,102,292		3,455,590		5,287,386		15,143,274		25,988,542
Timber.....Cub. ft.		83,700		3,514,944				70,500		3,669,144
Staves.....No.		32,876		1,038,349				90,000		1,161,225
1884.										
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	173	68,250	285	73,057	99	67,637	364	97,794	921	306,738
	Tons.		Tons.		Tons.		Tons.		Tons.	
Wheat.....		38,859		11,618		5,461		75,474		131,412
Corn.....		10,841		13,609		26,452		67,909		118,811
Barley.....		90								90
Rye.....		477								477
Oats.....		872				7,963		1,911		10,746
Coal.....		497		28,275		301		10,154		39,227
Shingles, firewood and woodenware		548		2,538		49		30		3,165
Miscellaneous merchandise		2,073		3,804		11,793		428		18,103
Lumber.....Ft. B.M.		3,393,351		1,680,976		8,987,558		18,126,215		32,188,100
Timber.....Cub. ft.		437,356		2,107,780				159,647		2,704,783
Staves.....No.				75,000		33,741		301,267		410,008

I.—STATEMENTS showing the Quantity of Freight passed down the Welland Canal in Canadian and United States Vessels, &c.—*Continued.*

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	199	67,461	347	80,828	81	35,613	350	106,873	977	290,775
	Tons.		Tons.		Tons.		Tons.		Tons.	
1885.										
Wheat.....		26,025		3,153		6,882		72,478		108,538
Corn.....		16,046		2,462		20,589		78,439		117,536
Barley.....				228						228
Oats.....						217		665		882
Pease.....		11								11
Rye.....										
Coal.....		1,005		20,318				18,560		39,883
Miscellaneous merchandise		1,941		3,689		1,111		1,086		7,827
Shingles, woodenware, &c.		223		9		53		58		343
Sawed Lumber...Ft. B.M.		7,725,105		8,681,081		9,381,654		20,935,270		46,723,110
Square Timber...Cub. Ft.		601,516		2,849,526		20,692		113,682		3,585,416
Staves.....No.		104,000		44,000		83,500				231,500
Firewood.....Cords				783						783
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	261	95,928	426	123,297	118	86,937	358	108,344	1163	414,506
	Tons.		Tons.		Tons.		Tons.		Tons.	
1886.										
Wheat.....		38,984		30,834		2,937		70,019		142,774
Corn.....		48,547		33,315		36,852		99,644		218,358
Barley.....								572		572
Oats.....		6		41		4,331		459		4,837
Pease.....		459		158						608
Rye.....										
Coal.....		4,007		45,018				11,647		60,672
Miscellaneous merchandise		2,926		6,728		23,687		281		33,622
Shingles, woodenware, &c.		329				252		215		1,152
Sawed Lumber...Ft. B.M.		6,915,390		15,719,631		8,953,478		18,405,961		49,994,460
Square Timber...Cub. Ft.		564,827		2,335,205				35,500		2,935,532
Staves.....No.		221,280		697,933						919,213
Firewood.....Cords				390						390
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	250	86,344	372	101,745	107	94,029	163	46,152	892	328,270
	Tons.		Tons.		Tons.		Tons.		Tons.	
1887.										
Wheat.....		80,757		81,652		200		46,186		208,796
Corn.....		12,341		14,775		65,981		20,582		113,679
Barley.....						9		575		584
Oats.....				1,376		11,098		279		12,753
Pease.....				362						362
Rye.....										
Coal.....		1,436		25,165				2,108		28,769
Miscellaneous merchandise		2,179		4,609		24,395		415		31,598
Shingles, Woodenware, &c.		1,716		1,081		26				2,823
Sawed Lumber...Ft. B.M.		2,894,767		12,329,728		4,161,349		15,091,355		34,477,199
Square Timber...Cub. Ft.		498,770		1,285,594						1,784,364
Staves.....No.				266,697						266,697
Firewood.....Cords		299		466						765

I.—STATEMENT showing the Quantity of Freight passed down the Welland Canal, in Canadian and United States Vessels, &c.—*Concluded..*

ARTICLES.	Canadian Vessels.				United States Vessels.				Total.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	242	86,838	339	93,450	114	104,505	219	60,500	914	345,293
	Tons.		Tons.		Tons.		Tons.		Tons.	
1888.										
Wheat.....		45,481		60,379		1,353		40,779		147,992
Corn.....		38,620		14,251		71,988		71,175		196,024
Barley.....										
Oats.....		672				24,967		1,311		26,950
Pease.....				54		57				111
Rye.....						71		632		703
Coal.....		1,603		20,064				4,208		25,875
Miscellaneous merchandise		2,165		3,291		22,719		3,722		31,897
Shingles, Woodenware, &c.		66		84		141		6		297
Sawed Lumber... Ft. B.M.		5,262,700		11,977,905		4,451,360		12,539,672		34,230,637
Square Timber... Cub. Ft.		687,728		1,555,307		19,000				2,262,035
Staves..... No.		106,972		211,436				34,000		352,408
Firewood..... Cords		179		201						380
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	317	106,048	427	118,071	208	172,873	268	92,442	1220	489,434
	Tons.		Tons.		Tons.		Tons.		Tons.	
1889.										
Wheat.....		38,127		28,054		1,679		46,767		114,627
Corn.....		60,218		43,819		152,858		96,700		353,595
Barley.....										
Oats.....		320				25,347		2,145		27,812
Pease.....										
Rye.....		948		634		336				1,918
Coal.....		3,976		21,148		712		1,664		27,500
Miscellaneous merchandise		6,339		5,749		25,082		3,030		40,200
Shingles, woodenware, &c.				1				51		52
Sawed lumber, Ft. B.M....		5,789,226		11,632,330		11,792,850		21,026,211		50,240,617
Square timber, Cubic Ft..		924,645		2,934,989						3,859,634
Staves, No.....		35,700		194,649						220,349
Firewood, Cords.....				46						46

J.—STATEMENT of Large Class of Vessels Lightened at Welland Railway Elevator at Port Colborne; showing the Tonnage, Dimensions, Depth of Water and Cargoes passed through the Enlarged Welland Canal during the Season of Navigation in 1889.

CANADIAN STEAM VESSELS.

Date of Arrival.	Names of Vessels.	Registered tonnage.	Length over all.	Width of beam.	Depth of hold.	Depth of Water on Arrival.		Original Cargo to Canal.				Lighterage over the Welland Railway.			
						Forward.	Aft.	Wheat.	Corn.	Oats.	Rolling freight.	Wheat.	Corn.	Oats.	Rolling freight.
1889.		Tons.	Ft.	Ft. in.	Ft. in.	Ft. in.	Ft. in.	Bush.	Bush.	Bush.	Tons.	Bush.	Bush.	Tons.	Tons.
Sept. 13.	L. Shickluna.....	394	135	23	0	12	0	11	0	11	2	16,196			
Dec. 4.	Erm.....	317	174	26	0	12	6	11	0	11	0	26,194			
	Total.....							42,390				11,597			348

CANADIAN SAILING VESSELS.

July 6	G. M. Neelon.....	314	138	3	25	8	11	6	11	1	11	11	22,563			175			
do 6	T. R. Merritt.....	328	138	0	25	4	12	2	11	10	11	9	22,885			179			
do 23	G. M. Neelon.....	314	138	3	25	8	11	6	11	11	11	11	23,060			186			
Aug. 27	G. M. Neelon.....	314	138	3	25	8	11	6	12	0	12	0	23,000			187			
	Total.....												91,508			727			

UNITED STATES STEAM VESSELS.

April 20	John Ruger.....	950	216	35	0	18	0	13	10	14	5	50,000				41			
do 21	D. C. Whitney.....	1,013	246	42	0	14	6	14	10	14	9							250	
do 22	Wm. A. Haskill.....	1,441	265	37	0	16	6	13	11	14	6	37,182	20,883	1,195				77	19
do 22	Anna Smith.....	657	178	32	6	13	8	14	10	15	2	39,691						200	
do 23	W. J. Averill.....	1,425	265	36	6	16	5	14	10	15	0	62,625						236	

do	26	Jno. Pridgeon, jr.	1,037	247	36	0	14	0	14	5	48,794	185	3,245	91
May	15	W. A. Haskill	1,441	265	37	0	16	6	13	9	25,444	388	1,523	43
do	20	Veronica	881	202	34	8	18	0	14	4	53,000		5,262	147
do	30	W. A. Haskill	1,441	265	37	0	16	6	14	7	53,302	168	5,144	144
June	7	W. J. Averill	1,425	265	36	6	16	5	14	8	67,112	164	7,145	200
do	23	John Rugee	950	216	35	0	18	0	15	0	60,472		8,634	242
do	23	W. A. Haskill	1,441	265	37	0	16	6	14	6	42,668	536	4,652	131
July	10	W. J. Averill	1,425	265	36	6	16	6	14	11	53,126	586	9,384	263
Aug.	12	W. A. Haskill	1,441	265	37	0	16	6	15	0	50,867	381	8,891	249
do	12	John Rugee	950	216	35	0	18	0	15	9	62,554		9,648	270
do	17	W. J. Averill	1,425	265	36	6	16	5	14	0	44,008	352		
Sept.	2	W. A. Haskill	1,441	265	37	0	16	6	13	10	54,243	284	7,860	220
do	4	S. J. Macey	613	164	31	8	11	0	14	11	43,711		5,041	141
do	5	W. J. Averill	1,425	265	36	6	16	5	14	10	47,159	503	9,224	258
do	17	C. J. Kushaw	1,107	233	37	0	19	0	15	6	54,484		9,738	272
do	17	W. A. Haskill	1,441	265	37	0	16	6	13	6	50,000	336	5,481	153
do	20	John Rugee	950	216	35	0	18	0	15	3	61,826		10,740	301
do	24	Argonaut	985	213	35	0	12	0	14	5	46,998		2,756	77
do	24	W. J. Averill	1,425	265	36	6	16	5	15	3	53,477	323	10,725	300
Oct.	2	Veronica	881	202	34	8	18	0	14	5	53,295		6,257	175
do	3	Mont Eagle	1,035	237	35	0	19	8	15	6	59,004		10,294	288
do	10	Gov. Smith	1,547	240	42	0	16	8	15	7	70,006	253	14,299	400
do	12	W. A. Haskill	1,441	265	37	0	16	6	14	3	52,975	220	6,435	180
do	14	Argonaut	985	213	35	0	12	0	15	0	53,000		8,484	238
do	16	D. C. Whitney	1,013	246	40	6	14	6	15	3	64,801		11,186	313
do	20	W. J. Averill	1,425	265	36	6	16	5	14	7	39,577	636	7,373	206
do	23	W. L. Frost	1,263	250	37	0	15	0	13	6	47,759	290	6,690	187
do	24	Jas. R. Langdon	1,550	240	42	0	16	8	15	4	60,286	340	8,978	251
do	28	Gov. Smith	1,547	240	42	0	16	8	13	8	61,580	121	6,934	194
do	31	Argonaut	985	213	35	0	12	0	14	11	51,427		8,315	233
Nov.	1	W. A. Haskill	1,441	265	37	0	16	6	13	10	32,904	307	1,482	41
do	11	W. J. Averill	1,425	265	36	6	16	5	13	8	40,432	447	916	26
do	13	Jas. N. Langdon	1,550	240	42	0	16	8	14	0	47,872	476	2,153	60
do	24	W. A. Haskill	1,441	265	37	0	16	6	14	0	25,111	389	1,944	24
do	27	Mont Eagle	1,035	237	35	0	19	8	14	2	83,225		3,984	64
Total										50,000	1,923,122	193,222	253,306	15

UNITED STATES SAILING VESSELS.

April 15	Iron State	1,086	214	35	0	18	2	14	10	14	2	55,453	1,384	39
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J.—STATEMENT of Large Class of Vessels Lightered at Welland Railway Elevator at Port Colborne, &c.—Continued.

CANADIAN STEAM VESSELS.

Date of Arrival.	Names of Vessels.	Grain Cargo and Rolling Freight through Welland Canal.						Destination.		Cost of lightering per bushel.	H. M.
		Wheat.	Corn.	Oats.	Wheat.	Corn.	Oats.	Rolling freight.	Total Cargo through Canal.		
1889.											
Sept. 13	L. Shickluna.	Bush. 12,840			Tons. 386			Tons. 386	St. Catharines	2	4 0
Dec. 4	Erin	17,953			539			539	Port Arthur	2	5 0
	Total.	30,793			925			925			

CANADIAN SAILING VESSELS.

July 6	G. M. Neelon	16,739			503				503	Chicago	2	3 0
do 6	T. R. Merritt	16,319			508				508	do	2	4 0
do 23	G. M. Neelon	16,846			506				506	do	2	4 0
Aug. 27	G. M. Neelon	16,756			503				503	do	2	4 0
	Total	67,260			2,020				2,020			

UNITED STATES STEAM VESSELS.

April 20	John Rugee.	48,624	52,706	19,688	1,459	1,476			1,459	Milwaukee	2	5 0
do 21	D. C. Whitney		34,450			965	315	295	1,476	Chicago	2	4 0
do 22	Wm. A. Haskill		32,224			983			1,575	do	2	5 0
do 22	Anna Smith								903	Detroit	2	6 0
do 23	W. J. Averill		54,206			1,518		48	1,566	Chicago	2	4 0

do	26	Jno. Pridgeon, jr.	45,549	1,276	185	1,461	do	2	0
May	15	W. A. Haskill	23,921	670	388	1,594	do	2	0
do	29	Veronica	47,738	1,337	...	1,337	do	3	0
do	30	W. A. Haskill	51,158	1,433	168	1,601	do	3	0
June	7	W. J. Averill	49,967	1,400	164	1,564	do	5	0
do	23	John Ruggee	51,838	1,452	...	1,452	Kingston	2	4
do	23	W. A. Haskill	38,016	1,005	536	1,601	Ogdensburg	2	0
July	30	W. J. Averill	35,742	1,001	586	1,587	do	5	0
Aug.	12	W. A. Haskill	41,976	1,176	381	1,537	do	3	0
do	12	John Ruggee	52,906	1,482	...	1,482	do	4	0
do	17	W. J. Averill	44,008	1,233	337	1,570	do	1	0
Sept.	2	W. A. Haskill	46,383	1,299	284	1,583	do	3	0
do	4	S. J. Macey	38,670	1,083	...	1,083	do	3	0
do	5	W. J. Averill	37,935	1,063	503	1,566	Ogdensburg	4	0
do	17	C. J. Kushaw.	44,746	1,253	...	1,253	Kingston	5	0
do	17	W. A. Haskill	44,519	1,247	336	1,583	Ogdensburg	2	50
do	20	John Ruggee	51,086	1,431	...	1,431	do	5	0
do	24	Argonaut	44,242	1,239	...	1,239	Kingston	1	0
do	24	W. J. Averill	44,752	1,254	323	1,577	Ogdensburg	4	0
Oct.	2	Veronica	49,038	1,374	...	1,374	Kingston	4	30
do	3	Mount Eagle	49,310	1,381	...	1,381	do	5	0
do	10	Gov. Smith	55,707	1,560	253	1,813	Ogdensburg	7	0
do	12	W. A. Haskill	45,640	1,278	220	1,498	do	7	0
do	14	Argonaut	45,516	1,247	...	1,247	Kingston	6	0
do	16	D. C. Whitney	53,615	1,502	...	1,502	do	5	0
do	20	W. J. Averill	32,204	1,150	636	1,538	Ogdensburg	4	0
do	23	W. L. Frost	41,069	1,437	290	1,440	do	2	45
do	24	Jas. R. Langdon	51,308	1,531	340	1,777	do	5	0
do	28	Gov. Smith	54,646	1,581	121	1,652	do	2	45
do	31	Argonaut	43,112	1,208	...	1,208	do	4	30
Nov.	1	W. A. Haskill	31,422	880	314	1,501	Kingston	4	10
do	11	W. J. Averill	39,516	1,107	447	1,554	Ogdensburg	2	0
do	13	Jas R. Langdon	45,719	1,281	476	1,757	do	2	30
do	24	W. A. Haskill	24,256	680	389	1,585	do	2	30
do	27	Mont Eagle	73,241	1,268	...	1,268	do	2	0
Total			48,624	46,774	8,013	59,195			

UNITED STATES SAILING VESSELS.

April 15	Iron State	54,069	1,514	1,514	1,514	Detroit	Kingston	2	2	0
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K.—STATEMENT showing the Quantity of Freight passed Eastward, from Lake Erie, through the whole length of the Welland and St. Lawrence Canals, to Montreal, during the seasons of Navigation in 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888 and 1889.

ARTICLES.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>									
Iron, pig.....	858	459							
do all other.....		9	5		7	15		418	
Stone for cutting.....	233	2							
Apples.....		1			513	49	33		
Barley.....		259		38					
Corn.....	69,066	17,474	109,191	55,552	44,401	116,517	24,609	66,443	195,350
Flour.....	4,476	5,920	5,089	9,659	2,874	2,934	6,140	3,865	6,841
Meal, all kinds.....			1,188		16	125	87	100	148
Oats.....				872					320
Peas.....			726	433	11	608	362		
Rye.....		1,269	518	477					1,284
Seeds, all kinds.....		37	2		42	33		12	3
Tobacco, raw.....		1				25			
Wheat.....	77,061	161,692	76,379	84,822	52,157	86,815	160,063	93,915	70,815
All other agricultural products, vegetable.....		1			1		17		798
Hides, skins, horns and hoofs.....			77						
Horses.....		1			2	1	1	2	2
Lard and lard oil.....	361	206	6			22		54	
Pork.....	5,141	278	212	318	30	936	418	265	1,220
All other agricultural products, animal.....					4	68	29	39	32
Total, Class 3.....	157,196	187,609	193,393	152,171	100,058	208,148	191,759	165,113	276,813
<i>Class 4.</i>									
Ashes.....	13	10	3	36	97	44	113	85	107
Furniture.....	4	12	6	10	5	6	9	2	
Glass, all kinds.....	47	6	1					3	
Molasses.....		18	43			28			
Nails.....				1			1		
Oil.....		425		78	7	6	14		4
Paint.....		4				1			
Pitch and tar.....		1							
Sugar.....			2				15		
Stone, wrought.....	291	484	269	317			12		
Turpentine.....		2		1					
Whiskey, beer and all other spirits.....		25	35			8		3	20
Merchandise not enumerated.....	60	105	53	37	29	100	72	105	193
Total, Class 4.....	415	1,092	412	480	138	193	236	198	324
<i>Class 5.</i>									
Barrels, empty.....	1	3		37	128	6	88	40	
Sawed lumber.....	2,849	3,639	6,311	7,531	19,945	18,707	7,001	5,175	6,118
Staves, pipe and barrel do West India and pipe.....	1,001	2,359	2,024	200	856	332	184	139	
do do.....	1,198	1,130	451	863		287	131	1,623	270
Timber, square, in vessels do rafts.....	3,227	1,574	290		639	1,330			
do do.....	3,250	1,149	2,314	7,365	11,128	15,410	14,390	11,586	9,302
Woodenware.....	76	205	199	68	76	101	45	25	
Total, Class 5.....	11,602	10,059	11,589	16,064	32,772	36,173	21,839	18,588	15,690
<i>Special Class.</i>									
Coal.....		75							10
Grand total.....	169,213	198,835	205,394	168,715	132,968	244,514	213,834	183,899	298,197

L.—STATEMENT showing the Quantity of Freight passed Westward from Montreal, through the whole length of the St Lawrence and Welland Canals to Lake Erie during the Seasons of Navigation in 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888 and 1889.

Articles.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>									
Bricks	81	96	78	200	44	66	3	187	84
Cement and water lime	38	533	508	219	117	498	1,740	1,177	823
Clay, lime and sand	121	56	56			1	134	95	3
Fish	18	406				1	95	1	80
Gypsum					13				
Iron, Railway	16,476	11,246	8,725	2,031	12,356	6,629	153	9,148	15,513
do Pig	8,131	3,575	2,460	43	23	10	368	573	250
do all other	900	686	528	366	290	76	1,997	297	290
Salt	5,175	1,820	5,324	802	1,574	5,609	4,197	3,599	4,216
Stone for cutting	5				7				
Flour			21						
Meals			5					31	
Oats			264						
Potatoes	359	23					4		
Seeds, all kinds	65	14						24	215
Agricultural Products not enumerated, vegetables	2		25	1	1			35	19
Horses		2							2
Lard and lard oil					3		3		
Pork				45					
Wool		3					4		
All other articles not enumerated						6	4	77	
Total Class 3	31,371	18,460	17,994	3,707	14,428	12,896	8,702	15,244	21,495
<i>Class 4.</i>									
Ashes, pot and pearl					226	20			
Crockery and earthenware	24	116	137	47	10	40	164	336	112
Dye woods, &c			2			1	4		
Furniture	3	4	4	1		9	1	1	
Glass, all kinds	97	359	156	160	32	39	53	77	71
Manilla		5	5	17		7	5	1	
Molasses	14	58	3			23	1	7	56
Nails	258	576	1,085	160	205	389	147	578	736
Oil in barrels	54	119	122	80	10	82	28	22	9
Paint	47	124	103	161	24	36	80	59	49
Pitch and tar	1		50	1		5	1		
Rosin		11	21						
Soda, ash	3,177	1,040	1,801	1,427	164	975	1,116	1,196	766
Steel	29		3	142		1	423	3	3
Stone wrought			2						
Sugar	5	465	375	290	64	316	207	98	7
Tin	959	641	1,669	1,832	10	549	2,225	198	480
Turpentine			1	1		1	1	1	1
White lead		14		3		3	4	2	4
Whiting	10	5	19		9		7		33
Whiskey, beer, &c	91	564	791	364	259	174	287	228	124
Merchandise not enumerated	984	1,992	2,608	1,001	712	1,008	619	1,259	1,422
Total Class 4	5,753	6,093	8,957	5,687	1,725	3,678	5,373	4,066	3,873
<i>Class 5.</i>									
Barrels, empty	40	130	179			227			2
Lumber, sawn, in vessels		175	318						
Woodenware	26	23		3	2				
Total Class 5	66	328	497	3	2	227			2
<i>Special Class.</i>									
Coal			40	28					
Grand Total	37,190	24,881	27,488	9,425	16,155	16,801	14,075	19,310	25,370

M.—STATEMENT showing the Quantity of Freight passed Eastward through the Welland Canal, from United States Ports to United States Ports during the Seasons of Navigation in 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888 and 1889.

Articles.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
<i>Class 3.</i>										
Bricks	22		3				41			
Cement and water lime			2				31		4	
Fish				1				2		
Iron, Railway				142						
do all other		79	114	90	40		45			520
Salt				8			1			
Stone for cutting	258			38	15					
Apples		1	8							
Barley			537	735				1,709	2	
Corn	16,122	30,031	32,433	66,128	53,707	63,229	93,503	83,431	102,974	147,045
Flour			107	2,041	1,715	124	7,591	11,780	8,563	5,017
Hay, pressed					13					
Meal, all kinds			5	8,579	8,170		13,201	10,726	11,598	17,224
Oil cake				1						
Oats	296			731	9,874	882	4,790	12,050	26,510	27,492
Potatoes			1							1
Rye			684						179	
Seeds, all kinds		16		662	511		236	44	48	151
Wheat	30,611	34,320	30,227	54,282	40,956	53,235	53,258	37,678	39,999	39,229
Agricultural products, vegetable			5	3			2	2		
Hides and skins, &c.				60	73		414	170	39	
Horses			1	6	6		1	2		1
Lard and lard oil, &c.				5	7		13	14	19	32
Meats, other than pork			1	12	4		1	18	14	3
Pork			1	163			106	108	19	21
Sheep					1					
Wool				95			1,125	86	18	452
Total, Class 3	47,309	64,447	64,129	133,782	115,092	117,470	174,359	157,820	189,986	237,188
<i>Class 4.</i>										
Agricultural implements		3		1				9		
Crockery and earthenware		4	1	1					1	1
Furniture			15	25	16		21	24	30	30
Glass, all kinds			66		1		2			
Nails		102	7	51	26		4			
Oil, in barrels			995	206	255		6	8		
Paint			3	6						
Soda, ash			7							
Steel			1						3	
Stone, wrought	192	29	33	87	7		38			2
White lead		2	6	5						
Whiskey, beer and all other spirits	14		12	156	26		21	63	151	190
Merchandise, not enumerated	1	49	91	941	481	2	824	469	1,453	1,679
Total, Class 4	207	189	1,237	1,479	812	2	916	573	1,638	1,902
<i>Class 5.</i>										
Lumber, sawn, in vessels	33,555	30,462	34,182	34,189	43,713	44,668	43,776	29,845	28,333	55,074
Hoops				26						
Shingles	9		9	9	76	111	463		6	51
Staves, barrel				25					82	
Woodenware, &c.	1	4	43	30	11		2	26	141	333
Total, Class 5	33,565	30,466	34,234	34,279	43,800	44,779	44,241	29,871	28,562	55,458
<i>Special Class.</i>										
Coal	871	1,164	10,686	5,372	4,293	4,974	5,400	1,163	878	1,124
Stone not suitable for cutting										1,681
Total, Special Class	871	1,164	10,686	5,372	4,293	4,974	5,400	1,163	878	2,805
Grand Total	81,952	96,266	110,286	174,912	163,997	167,225	224,916	189,427	221,064	297,553

N.—STATEMENT showing the number of Vessels and their Cargoes of Wheat, from Ports West of Port Colborne to Montreal; the Quantity transhipped to Kingston, and the Quantity of each Cargo through the St. Lawrence Canals, during the Season of Navigation in 1889.

Names of Vessels.	Original Cargo through the Welland Canal.	Quantity transhipped at Kingston.	Cargo through the St. Lawrence Canals.
	Tons.	Tons.	Tons.
Canadian Steamer "Acadia".....	577	92	485
do do	420	135	285
do do	511	113	398
do do	600	154	446
do "Alma Monro".....	458	182	276
do do	407	131	276
do "Canada".....	555	179	376
do do	548	250	298
do do	555	276	279
do "Cuba".....	602	262	340
do do	541	240	301
do do	216	210	6
do do	600	251	349
do "Celtic".....	516	211	305
do do	510	228	282
do do	509	225	284
do do	510	257	253
do "Lake Michigan".....	540	216	324
do do	527	264	263
do "Shickluna".....	526	225	301
Canadian Sailing Vessels "John Gaskin".....	1,054	390	664
do do "Jennie".....	960	321	639
do do do	883	306	577
do do "Kildonan".....	1,028	257	771
do do "Regina".....	848	215	633
do do	799	235	564
Total.....	15,800	5,825	9,975

Number of cargoes of wheat.....	26
Quantity through Welland Canal to Kingston.....	15,800 tons.
do transhipped at Kingston.....	5,825 do
do taken to Montreal in vessels in which it arrived at Kingston.....	9,975 do

N.—STATEMENT showing the Number of Vessels and their Cargoes of Corn from Ports west of Port Colborne to Montreal; the quantity transhipped at Kingston, and the quantity of each cargo through the St. Lawrence Canals during the Season of Navigation in 1889.

Names of Vessels.		Original Cargo through the Welland Canal.	Quantity transhipped at Kingston.	Cargo through the St. Lawrence Canals.
		Tons.	Tons.	Tons.
Canadian steamer	"Alma Munro"	616	238	378
do	do	560	240	320
do	do	560	271	289
do	do	672	265	407
do	do	672	309	363
do	"Acadia"	422		422
do	do	588	163	425
do	do	575	125	450
do	do	476	109	367
do	"Celtic"	481	196	285
do	"Cuba"	560	207	353
do	do	560	252	308
do	do	443	173	270
do	"Canada"	510	193	317
do	"Lake Michigan"	509	199	310
do	do	510	199	311
do	"St. Magnus"	980	576	404
Canadian sailing vessel	"Jennie"	898	257	641
do	do	946	318	628
do	do	952	350	602
do	"Kildonan"	1,175	336	839
do	do	1,154	328	826
do	do	1,120	294	826
do	do	1,126	286	840
do	do	1,120	308	812
do	"Glenora"	1,307	623	679
do	"Regina"	849	233	616
do	do	843	224	619
do	do	857	262	595
		22,041	7,534	14,502

Number of cargoes of corn.....	29
Quantity through Welland Canal to Kingston.....	Tons. 22,041
do transhipped at Kingston.....	do 7,534
do taken to Montreal in vessels in which it arrived at Kingston....	do 14,502

RECAPITULATION, 1889.

	Number of Cargoes.	Total.
Wheat	26	
Corn	29	
Total		55
Quantity of wheat through the Welland Canal bound to Montreal.....	Tons. 15,800	Tons.
do corn do do	22,041	
Total through Welland Canal.....		37,841
Quantity of the above cargoes transhipped at Kingston, viz. :—		
Wheat	5,825	
Corn.....	7,534	
Total transhipped.....		13,359
Quantity of the above cargoes taken to Montreal in vessels in which it arrived at Kingston, viz. :—		
Wheat	9,975	
Corn.....	14,502	
Total quantity to Montreal.....		24,477

O.—STATEMENT showing the Quantity of Grain passed down the Welland Canal to Kingston in Canadian and United States Vessels entering the Canal at Port Colborne during the Season of Navigation in 1889.

ARTICLES.	CANADIAN VESSELS.				UNITED STATES VESSELS.				TOTAL.	
	Steam.		Sail.		Steam.		Sail.		Steam and Sail.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
	118	68,568	90	35,018	47	37,339	67	27,229	322	168,154
	Tons.		Tons.		Tons.		Tons.		Tons.	
Corn.....	57,997		41,539		51,962		46,273		197,771	
Oats.....	320								320	
Pease.....										
Rye.....	948		634		336				1,918	
Wheat.....	35,659		28,020		1,459		8,328		73,466	
Total.....	94,924		70,193		53,757		54,601		273,475	

118 cargoes in Canadian steam vessels ; total quantity	Tons. 94,924
90 do do sailing do do	70,193
47 do United States steam vessels ; total quantity.....	53,757
67 do do sailing do do	54,601

P.—TOTAL quantity of grain arrived at Kingston in vessels which passed down the Welland Canal during the season of navigation in 1889 :—

Summary.	Tons.	Total Tons.
Canadian steam vessels, 118 cargoes of grain	94,924	
do sail vessels, 90 do	70,193	
Total Canadian vessels		165,117
United States steam vessels, 47 cargoes of grain	53,757	
do sail vessels, 67 do	54,601	
Total in United States vessels		108,358
Total in Canadian and United States vessels		273,475
Distributed as follows :—		
1 cargo taken to Montreal in Canadian vessels without breaking bulk. ...		425
54 cargoes arrived at Kingston in Canadian vessels with an aggregate quantity of.	37,416	
Transhipped	13,359	
Quantity taken to Montreal in vessels in which it arrived at Kingston		24,057
Vessels arrived at Kingston and discharged all of their cargo as follows :—		
153 cargoes in Canadian vessels	127,276	
114 in United States vessels	108,358	
Aggregate quantity discharged	235,634	
Transhipped in Canadian vessels to Montreal	229,928	
Transhipped <i>via</i> C.P.R. to Montreal	638	
Quantity transhipped to Montreal	230,566	
Quantity remaining at Kingston		5,068
Total quantity transhipped		243,925
Total		273,475

Q.—COMPARATIVE Statement of the Quantity of Grain passed down the Welland Canal to Kingston for the Seasons of 1888 and 1889.

	1888.		1889.	
	No. of Cargoes.	Tons.	No. of Cargoes.	Tons.
Quantity arrived at Kingston in Canadian vessels	182	143,025	208	165,117
do do United States vessels	60	43,667	114	108,358
Total	242	186,692	322	273,475
Quantity transhipped at Kingston in Canadian vessels for Montreal		144,127		243,287
Quantity taken to Montreal in vessels in which it arrived at Kingston		16,231		24,482
Quantity transferred in cars and taken to Montreal by rail		14,921		638
Quantity remaining at Kingston		11,413		5,068
Total		186,692		273,475

1 Vessel took cargo through to Montreal intact in 1889 against 2 in 1888.

54 Vessels lightened their cargoes at Kingston in 1889 against 39 in 1888.

267 Vessels discharged the whole of their cargoes at Kingston in 1889 against 201 in 1888.

R.—Statement showing the quantity of Oats arrived at Montreal by Canal and Rail during the Years 1884 to 1889, inclusive, and the total shipments for the same period.

YEARS.	Receipts <i>via</i> , Lachine Canal.	Receipts <i>via</i> , C. P. R. and G. T. R. is reported as follows.	Total Receipts at Montreal.	Shipments.
	Bushels.	Bushels.	Bushels.	Bushels.
1884.....	297,326	528,032	825,358	246,643
1885.....	678,866	550,425	1,229,291	1,463,932
1886.....	650,910	595,756	1,246,666	2,033,098
1887.....	341,568	452,748	794,316	509,010
1888.....	123,213	542,007	665,220	70,809
1889.....	119,958	812,750	932,708	88,910
Total.....	2,211,841	3,481,718	5,693,559	4,412,402

S.—The quantity of Coal passed through the Welland Canal during the series of Years from 1885 to 1889, inclusive, and the amount of tolls collected thereon.

YEARS.	From United States Ports to Canadian Ports.		From United States Ports to United States Ports.		Total	Amount of Tolls Paid at 20c. per ton.
	Up.	Down.	Up.	Down.		
	Tons.	Tons.	Tons.	Tons.	Tons.	\$ cts.
1885.....	10,321	31,350	193,442	4,974	240,087	48,017 40
1886.....	22,187	49,724	184,564	5,400	261,875	52,375 00
1887.....	26,775	25,968	81,617	1,163	135,523	27,104 60
1888.....	17,365	27,183	172,381	878	217,807	43,561 40
1889.....	12,036	25,931	226,352	1,124	265,443	53,088 60
Total.....	88,684	160,156	858,356	13,359	1,120,735	224,147 00
Average.....	17,737	32,031	171,671	2,708	224,147	44 829 40

The quantity of coal passed westward through the Welland Canal for five years is as follows:—

	From United States Ports to United States Ports. Tons.	From United States Ports to Canadian Ports. Tons.
1885.....	193,442	10,321
1886.....	184,564	22,187
1887.....	81,617	26,775
1888.....	172,381	17,365
1889.....	226,352	12,036
Total.....	858,356	88,684
Average.....	171,671	17,737

It will thus be seen that the quantity passed westward through the Welland Canal to United States ports in 1889 shows a large increase over the preceding years, all of which was carried in United States vessels.

Of the quantity passed westward to Canadian ports in 1889 Canadian vessels carried 11,263 tons.

Of the total quantity, 238,388 tons, passed westward in 1889, United States vessels carried 227,125 tons, and paid tolls to the amount of \$45,425; Canadian vessels carried 11,263 tons, and paid tolls to the amount of \$2,252.60.

The quantity of coal passed down (or eastward) through the Welland Canal for five years is as follows:—

	From United States Ports to United States Ports. Tons.	From United States Ports to Canadian Ports. Tons.
1885.....	4,974	31,350
1886.....	5,400	49,724
1887.....	1,163	25,968
1888.....	878	27,183
1889.....	1,124	25,931
Total.....	13,539	160,156
Average.....	2,708	32,031

It will thus be seen that the quantity eastward to United States ports in 1889 was.....	Tons. 1,124
And the quantity to Canadian ports was.....	25,931

Making a total of.....	27,055
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Of which Canadian vessels carried.....	24,679
And United States vessels carried.....	2,376

Total.....	27,055
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Amount of tolls paid on quantity carried in Canadian vessels....	\$4,935 80
Amount of tolls paid on quantity carried in United States vessels	475 20

Total.....	\$5,411 00
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The quantity of coal passed down (or eastward) through the Welland Canal in Canadian and United States vessels for the years 1885 to 1889 is as follows:—

Year.	Quantity Carried in Canadian Vessels.		Quantity Carried in United States Vessels.		Total Quantity Carried in Canadian and United States Vessels.	
	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
		\$ cts.		\$ cts.		\$ cts.
1885.....	17,764	3,552 80	18,560	3,712 00	36,324	7,264 80
1886.....	43,477	8,695 40	11,647	2,329 40	55,124	11,024 80
1887.....	25,023	5,004 60	2,108	421 60	27,131	5,426 20
1888.....	23,853	4,770 60	4,208	841 60	28,061	5,612 20
1889.....	24,679	4,935 80	2,376	475 20	27,055	5,411 00
Total.....	134,796	26,959 20	38,899	7,779 80	173,695	34,739 00
Average.....	26,960	5,392 00	7,780	1,556 00	34,739	6,947 80

The quantity of coal passed through the Welland Canal during a series of years from 1885 to 1889 inclusive, and the amount of tolls collected thereon, is as follows:—

Year.	From United States Ports to United States Ports.		From United States Ports to Canadian Ports.		Total Tons.	Amount of Tolls Paid. — Rate, 20 cents a ton.
	Up.	Down.	Up.	Down.		
	Tons.	Tons.	Tons.	Tons.		\$ cts.
1885.....	193,442	4,974	10,321	31,350	240,087	48,017 40
1886.....	184,564	5,400	22,187	49,724	261,875	52,375 00
1887.....	81,617	1,163	26,775	25,968	135,523	27,104 60
1888.....	172,381	878	17,365	27,183	217,807	43,561 40
1889.....	226,352	1,124	12,036	25,931	265,443	53,188 60
Total.....	858,356	13,359	88,684	160,156	1,120,735	224,147 00
Average.....	171,671	2,708	17,737	32,031	224,147	44,829 40

T.—STATEMENT showing the quantity of Coal passed through the whole length of the St. Lawrence Canals during the Seasons of 1885 to 1889 inclusive.

Years.	Quantity passed up Free of Tolls.		Quantity passed down to Montreal.		Total Quantity passed up and down.	Amount of Tolls on quantity passed down to Montreal.
	Tons.	Tons.	Tons.	Tons.		\$ cts.
1885.....	5,035	122,829	127,864		127,864	18,424 35
1886.....	3,301	118,802	122,103		122,103	17,820 70
1887.....	7,579	121,618	129,197		129,197	18,242 70
1888.....	8,341	123,050	131,391		131,391	18,423 90
1889.....	5,360	124,290	129,650		129,650	18,604 90

U.—COMPARATIVE STATEMENT of the quantity of Freight passed down the Welland Canal, showing the quantity to Montreal, the quantity to Canadian Ports between Port Dalhousie and Cornwall, and the quantity to United States Ports, Oswego, Ogdensburg, &c., on the south side of Lake Ontario, for the Years 1883 to 1889, inclusive.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
	Tons.	Tons.	Tons.
1883.			
Ashes, pot and pearl.....	3	2	
Agricultural products, not enumerated, vegetable.....		3	3
do do animal.....		6	
Agricultural implements.....			1
Barley.....			735
Coal.....		89,344	5,372
Corn.....	109,191	6,815	66,128
Crockery and earthenware.....			1
Fish.....			1
Flour.....	5,089		2,041
Furniture.....	6	8	25
Glass.....	1	9	
Horses.....			6
Hides and skins.....	77	26	60
Iron, railway.....			142
do all other.....	5	39	90
Lard and lard oil.....	6	1	5
Meal, all kinds.....	1,188	138	8,579
Meats, other than pork.....		2	12
Manilla.....			4
Molasses.....	43	4	1
Nails.....			51
Oats.....			731
Oil, in barrels.....		300	206
Oil cake.....			1
Pease.....	726		
Pork.....	212	13	163
Paint.....			6
Rags.....			271
Rye.....	518		
Salt.....			8
Stone, intended for cutting.....		2,584	38
do wrought.....	269	353	87
Seeds, all kinds.....	2		662
Steel.....	1		
Sugar.....	2		
Spirits, beer, &c.....	35	98	156
Tobacco, raw.....		5	
Tallow.....		2	
Wheat.....	76,379	3,835	54,282
White lead.....			5
Wool.....			95
All other merchandise, not enumerated.....	52	109	665
Barrels, empty.....		4	
Firewood, in vessels.....		930	
Hoops.....			26
Lumber, sawn, in vessels.....	6,311	792	34,732
Staves and headings, barrel.....		31	
do pipe.....	2,024	2,738	
do West India.....	451	1,946	
Staves, salt barrel.....			25
Shingles.....			9
Split post and fence rails, in vessels.....		1	
Timber, square.....	2,604	74,329	
Woodenware and wood, partly manufactured.....	199	35	30
Total.....	205,394	184,502	175,455

U.—COMPARATIVE STATEMENT of the quantity of Freight passed down the Well-land Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1884.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	36	10	.....
Agricultural products, not enumerated, vegetable.....	.....	7	.....
do do animal.....	.....	2	.....
Agricultural implements.....	.....	9	.....
Barley.....	38	52	.....
Coal.....	.....	32,598	4,293
Corn.....	55,552	9,552	53,707
Cattle.....	.....	1	.....
Fish.....	.....	13	.....
Flour.....	9,659	.....	1,715
Furniture.....	10	17	16
Glass, all kinds.....	.....	10	1
Hay, pressed.....	.....	.....	13
Horses.....	.....	2	6
Hides, horns and hoofs.....	.....	.....	73
Iron, all other.....	.....	8	40
Kryolite and chemical ore, and other ore, except iron.....	.....	10	.....
Lard and lard oil.....	.....	2	7
Meal, all kinds.....	.....	5	8,170
Meats other than pork.....	.....	28	4
Marble.....	.....	.....	1
Nails.....	1	.....	26
Oats.....	872	.....	9,874
Oil, in barrels.....	78	354	255
Pease.....	433	.....	.....
Pork.....	318	.....	.....
Rye.....	477	.....	.....
Salt.....	.....	364	.....
Stone, intended for cutting.....	.....	2,059	15
do wrought.....	317	190	7
Seeds all kinds.....	.....	111	511
Sheep.....	.....	.....	1
Spirits, beer, &c.....	.....	11	26
Turpentine.....	1	.....	.....
Wheat.....	84,822	2,549	40,975
All other goods and merchandise not enumerated.....	37	104	480
Barrels, empty.....	37	3	1
Firewood, in vessels.....	.....	930	.....
Lumber, sawn do.....	7,531	85	45,239
Staves and headings, barrel.....	.....	22	.....
do pipe.....	200	487	.....
do West India.....	863	406	.....
Shingles.....	.....	7	76
Timber, square.....	7,365	50,414	.....
Woodenware and wood, partly manufactured.....	68	3	11
Total.....	168,715	100,425	165,543

A refund of 10 cents per ton was allowed on wheat, corn, oats, barley and rye passed down to Montreal, per O. C., 28th May, 1884.

U.—COMPARATIVE STATEMENT of the quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1885.	Tons.	Tons.	Ton
Ashes, pot and pearl.....	97		
Apples.....	513		
Agricultural products not enumerated, vegetable.....	1		
do do animal.....	2		
Barley.....			228
Coal.....		31,350	4,974
Corn.....	44,401	9,906	63,229
Crockery and earthenware.....	1		
Flour.....	2,874		124
Furniture.....	5	11	
Horses.....	2	1	
Iron, pig.....		100	
do all other.....	7		
Iron ore.....			987
Lard and lard oil.....		2	
Meal, all kinds.....	16		
Oats.....			882
Oil, in barrels.....	7	568	
Pease.....	11		
Paint.....		68	
Pork.....	30		
Salt.....		407	
Stone, for cutting.....		3,749	
do wrought.....		8	
Seeds, all kinds.....	42	10	
Spirits, beer, &c.....		25	
Tallow.....	2	4	
Wheat.....	52,157	2,003	53,235
All other merchandise not enumerated.....	28	8	2
Barrels, empty.....	128	8	
Firewood, in vessels.....		540	
Lumber, sawn.....	19,945	6,774	49,561
Staves and headings.....	856	604	
Shingles.....			111
Timber, square.....	11,767	69,616	
Woodenware.....	76		
Total.....	132,968	125,762	173,333

A refund of 10 cents per ton was allowed on wheat, corn, oats, pease, barley and rye passed down to Montreal, per O. C. 17th June, 1885, and a refund of 18 cents per ton from 1st July, 1885, per O. C. 4th July, 1885.

U.—COMPARATIVE STATEMENT of the quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Ontario Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1886.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	44	10	11
Apples.....	49		
Agricultural products, not enumerated vegetable.....		1	1
Bricks.....			41
Cement and water lime.....			26
Coal.....		49,724	5,400
Corn.....	116,517	8,871	93,503
Flour.....	2,934		7,591
Furniture.....	6	15	21
Glass, all kinds.....			2
Horses.....	1		1
Hides and skins, &c.....			414
Iron, pig.....		617	43
do all other.....	15	12	1
Lard and lard oil.....	22	9	13
Meal, all kinds.....	125	18	13,201
Meats, other than pork.....	67	64	1
Marble.....		2	
Molasses.....	28	7	
Nails.....			4
Oats.....		41	4,790
Oil.....	6	28	6
Pease.....	608		
Pork.....	936	407	106
Paint.....	1	1	
Rags.....			13
Salt.....		29	1
Stone for cutting.....		4,314	
do wrought.....		103	38
Seed, all kinds.....	33	3	236
Sugar.....			3
Spirits, beer, &c.....	8	12	21
Tobacco, raw.....	25		
Tallow.....	1	2	1
Wheat.....	86,815	969	53,258
Wool.....			1,125
Merchandise not enumerated.....	100	46	793
Barrels, empty.....	6	2	
Floats.....		20	
Lumber, sawn, in vessels.....	18,767	7,546	53,124
Masts, spars, &c.....		22	
Staves and headings, barrel.....		57	
do do pipe.....	332	339	
do do West India.....	287	444	
Shingles.....		12	463
Timber, square.....	16,740	44,335	
Woodenware, &c.....	101	45	2
Total.....	244,514	118,127	234,254

A refund of 18 cents per ton was allowed on wheat, corn, oats, pease, barley and rye, passed down to Montreal, per O. C. 21st April, 1886.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Cana- dian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1887.	Tons.	Tons.	Tons.
Ashes pot and pearl	113		
Apples	33		
Agricultural Products not enumerated, vegetable			2
Agricultural Implements			9
Barley			1,709
Coal		25,968	1,163
Corn	24,609	6,898	83,431
Fish			2
Flour	6,140		11,780
Furniture	9	9	24
Horses	1	1	2
Hides, skins, &c			170
Iron, pig		1,137	
do all other		7	
Lard and lard oil		6	14
Meal, all kinds	87	42	10,726
Meats, other than pork	29	15	18
Nails	1		
Oats			12,650
Oil	14	190	8
Oil cake	17		
Pease	362		
Pork	418	86	108
Stone, for cutting		3,531	
do wrought	12	543	
Seeds		4	44
Sugar	15		1
Spirits		99	63
Wheat	160,063	4,940	37,678
Wool			86
All other merchandise not enumerated	72	123	468
Barrels, empty	88		24
Lumber, sawn	7,001	1,816	44,733
Staves and headings, barrel		27	
do pipe	184		
do West India	131	838	
Timber, square	14,390	21,351	
Woodenware and wood partly manufactured	45	1	2
Total	213,834	67,632	204,315

A refund of 18 cents per ton was allowed on wheat, corn, peas, barley and rye, passed down to Montreal, per Order in Council, 28th March, 1887.

U.—COMPARATIVE STATEMENT of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports, between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1888.	Tons.	Tons.	Tons.
Ashes, pot and pearl.	85		
Apples		45	
Barley			2
Cement and water lime			4
Coal		27,183	878
Corn	66,443	25,469	102,974
Crockery and earthenware		4	1
Flour	3,865		8,563
Furniture	2	1	30
Glass, all kinds	3	2	
Hay (pressed)		20	
Horses	2		
Hides and skins			39
Iron, pig		549	
do all other	418	490	
Lard and lard oil	54	12	18
Meal, all kinds	100		11,598
Meats, other than pork	39	6	14
Oats			26,510
Oil		3	
Pease		54	
Pork	265	61	19
Rags			14
Rye		632	179
Stone (for cutting)		6,535	
do wrought		126	
Seeds, all kinds	12	1	48
Steel			3
Sugar		2	4
Spirits	3	2	151
Tallow			1
Wheat	93,915	14,365	39,999
Wool			18
All other goods and merchandise not enumerated	105	34	1,435
Barrels (empty)	40		133
Lumber, sawn	5,174	4,515	45,818
Staves and headings, barrel	15	7	
do pipe	124		
do West Indies	1,623	13	
do salt barrel	1	1	
Shingles			6
Timber square (in vessels)	11,586	33,669	
Woodenware	25		8
Total	183,899	113,801	238,467

A refund of 18c. per ton was allowed on wheat, corn, pease, barley and rye passed down to Montreal, per O.C., 20th April, 1888.

COMPARATIVE Statement of the Quantity of Freight passed down the Welland Canal, &c.—*Continued.*

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports.
1889.	Tons.	Tons.	Tons.
Ashes, pot and pearl.....	107	5	.....
Coal.....	.....	25,931	1,124
Corn.....	195,350	11,200	147,045
Crockery and earthenware.....	.....	1	1
Fish.....	.....	5	.....
Flour.....	6,841	.....	5,017
Furniture.....	.....	4	30
Horses.....	2	.....	1
Iron, pig.....	.....	613	.....
do all other.....	.....	.....	520
Lard and lard oil.....	.....	5	19
Meal, all kinds.....	148	.....	17,224
Meats other than pork.....	32	2	3
Molasses.....	.....	.....	88
Oats.....	320	.....	27,492
Oil, in Barrels.....	4	2	.....
Oil cake.....	798	.....	.....
Potatoes.....	.....	.....	1
Pork.....	1,220	114	21
Rye.....	1,284	634	.....
Salt.....	.....	316	.....
Stone, for cutting.....	.....	6,784	.....
do wrought.....	.....	11	2
do not suitable for cutting.....	.....	375	1,681
Seeds, all kinds.....	3	.....	151
Spirits, beer, &c.....	20	8	190
Tallow.....	.....	.....	13
Wheat.....	70,815	7,241	39,229
Wool.....	.....	.....	452
Merchandise.....	193	129	1,591
Barrels, empty.....	.....	.....	173
Lumber, sawn.....	6,118	20,650	55,074
Masts, spars, etc.....	.....	220	.....
Railway ties.....	.....	852	.....
Saw logs.....	.....	.....	158
Staves and headings, barrel.....	.....	4	.....
do pipe.....	202	304	.....
do West India.....	68	559	.....
Shingles.....	.....	.....	51
Split posts, etc.....	.....	17	.....
Timber, square.....	9,302	70,819	.....
Woodenware, etc.....	.....	.....	2
Total.....	292,827	146,805	297,353

A refund of 18 cents per ton was allowed on wheat, corn, peas, barley and rye passed down to Montreal per Order in Council 18th March, 1889.

STATEMENT showing the quantity of freight passed down the Welland Canal to Canadian Ports, &c.—*Continued.*

RECAPITULATION.

Articles.	Quantity passed to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the South Side of Lake Ontario.
1883.	Tons.	Tons.	Tons.
Barley			735
Corn	109,191	6,815	66,128
Oats			731
Rye	518		
Wheat	76,379	3,835	54,282
Total Grain	186,088	10,650	121,876
Other Articles	19,306	173,852	53,579
Total	205,394	184,502	175,455
1884.			
Barley	38	52	
Corn	55,552	9,552	53,707
Oats	872		9,874
Rye	477		
Wheat	84,822	2,549	40,975
Total Grain	141,761	12,153	104,556
Other Articles	26,954	88,272	60,987
Total	168,715	100,425	165,543
1885.			
Barley			228
Corn	44,401	9,906	63,229
Oats			882
Pease	11		
Rye			
Wheat	52,157	2,003	53,235
Total Grain	96,569	11,909	117,574
Other Articles	36,399	113,853	55,759
Total	132,968	125,762	173,333
1886.			
Barley			
Corn	116,517	8,871	93,503
Oats		41	4,790
Pease	608		
Rye			
Wheat	86,815	969	53,258
Total Grain	203,940	9,881	151,551
Other Articles	40,574	108,246	82,703
Total	244,514	118,127	234,254

STATEMENT showing the Quantity of Freight passed down the Welland Canal to Canadian Ports, &c.—*Concluded.*

RECAPITULATION.

Articles.	Quantity passed down to Montreal.	Quantity passed down to Canadian Ports between Port Dalhousie and Cornwall.	Quantity passed down to United States Ports on the south side of Lake Ontario.
1887.	Tons.	Tons.	Tons.
Barley.....			1,709
Corn.....	24,609	6,898	83,431
*Oats.....			12,050
Pease.....	362		
Rye.....			
Wheat.....	160,063	4,940	37,678
Total Grain.....	185,034	11,838	134,868
Other Articles.....	28,800	55,794	69,447
Total.....	213,834	67,632	204,315
1888.			
Barley.....			2
Corn.....	66,443	25,469	102,974
Oats.....			26,510
Pease.....		54	
Rye.....		632	179
Wheat.....	93,915	14,365	39,999
Total Grain.....	160,358	40,520	169,664
Other Articles.....	23,541	73,281	68,803
Total.....	183,899	113,801	238,467
1889.			
Barley.....			
Corn.....	195,350	11,200	147,045
Oats.....	320		27,492
Pease.....			
Rye.....	1,284	634	
Wheat.....	70,815	7,241	39,229
Total Grain.....	267,769	19,075	213,766
Other Articles.....	25,158	127,730	83,587
Total.....	292,927	146,805	297,353

*There was no refund allowed on Oats for 1887, 1888 and 1889.

†Owing to a break in the Cornwall Canal, 14,921 tons of the above quantity of grain was transhipped to Montreal *via* Canadian Pacific and Grand Trunk Railways, and the refund of 18cts. per ton allowed.

V.—SUMMARY of Quantity of Freight passed down Welland Canal on which full Tolls were paid.

	Quantity passed down to Canadian Ports : Toronto, Hamilton, Kingston, Cornwall, &c.	Quantity passed down to United States Ports : Oswego, Odgens- burg, &c., on south side of Lake Ontario.
1883.	Tons.	Tons.
Grain.....	10,650	121,876
Other Articles.....	173,852	53,579
Total.....	184,502	175,455
1884.		
Grain.....	12,153	104,556
Other Articles.....	88,272	60,987
Total.....	100,425	165,543
1885.		
Grain.....	11,909	117,574
Other Articles.....	113,853	55,759
Total.....	125,762	173,333
1886.		
Grain.....	9,881	151,551
Other Articles.....	108,246	82,703
Total.....	118,127	234,254
1887.		
Grain.....	11,838	134,868
Other Articles.....	55,794	69,447
Total.....	67,632	204,315
1888.		
Grain.....	25,599	169,664
Other Articles.....	73,281	68,803
Total.....	98,880	238,467
1889.		
Grain.....	19,075	213,766
Other Articles.....	127,730	83,587
Total.....	146,805	297,353

CANAL

COMPARATIVE Statement for Years ended

	January.	February.	March.	April.	May.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Welland Canal, 1888				2,985 47	23,903 01
do 1889				17,061 73	23,791 75
Increase				14,076 26	
Decrease					111 26
St. Lawrence Canals, 1888				4 00	7,463 51
do 1889				1,471 78	9,134 72
Increase				1,467 78	1,671 21
Decrease					
Chamblly Canal, 1888				2 65	2,726 86
do 1889				30 46	3,550 36
Increase				27 81	823 50
Decrease					
Rideau Canal, 1888					746 50
do 1889				222 43	996 75
Increase				222 43	250 25
Decrease					
Ottawa Canals, 1888					8,902 90
do 1889				1,425 13	10,071 16
Increase				1,425 13	1,168 26
Decrease					
St. Peter's Canal, 1888	2 69			1 84	399 77
do 1889	1 96		9 98	150 50	457 71
Increase			9 98	148 66	57 94
Decrease	0 73				
Newcastle District Canals, 1888					16 70
do do 1889					21 42
Increase					4 72
Decrease					
Total increase			9 98	17,368 07	3,864 62
Total decrease	0 73				

Amount refunded on account of reduction of tolls on grain through Welland and St. Lawrence Canals, 1888, \$30,580.02; actual revenue, \$290,853.91.

Amount refunded on account of reduction of tolls on grain through Welland and St. Lawrence Canals, 1889, \$48,725.80; actual revenue, \$332,383.51.

REVENUE.

31st December, 1888 and 1889.

June.	July.	August.	September.	October.	November.	December.	Total.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
27,344 25	23,199 70	28,289 65	23,661 07	23,033 14	14,898 50	48 00	167,362 79
29,024 36	27,981 74	38,022 03	34,429 54	28,047 61	20,623 14	486 48	219,468 38
1,680 11	4,782 04	9,732 38	10,768 47	5,014 47	5,724 64	438 48	52,105 59
13,377 08	12,986 72	12,827 52	11,672 21	7,251 76	5,536 58	115 06	71,234 44
11,446 53	14,280 85	12,104 21	10,388 30	8,578 97	5,833 39	54 79	73,293 54
1,294 13	723 31	1,283 91	1,327 21	296 81	60 27	2,059 10	
1,930 55							
3,651 01	3,208 83	3,563 56	3,950 84	3,357 09	1,839 38		22,300 22
3,784 91	3,401 38	3,439 48	2,494 65	2,545 89	1,486 99		20,734 12
133 90	192 55	124 08	1,456 19	811 20	352 39		1,566 10
1,228 55	1,470 53	1,170 41	855 50	856 70	391 17		6,719 36
1,176 33	1,632 35	1,295 14	858 41	729 51	327 61	1 24	7,239 77
161 82	124 73	2 91	127 19	63 56	1 24	520 41	
52 22							
9,329 10	8,172 58	7,645 65	5,701 02	7,705 01	3,826 10	73 07	51,355 43
9,019 91	8,849 94	9,180 84	7,275 21	7,864 20	3,275 16		56,961 55
677 36	1,535 19	1,574 19	159 19	550 94	73 07	5,606 12	
309 19							
265 92	194 67	317 14	313 81	345 20	263 60	99 93	2,204 57
356 00	333 10	412 09	438 35	380 35	306 84	72 79	2,919 67
90 08	138 43	94 95	124 54	35 15	43 24	27 14	715 10
53 32	36 09	50 19	66 45	21 17	13 20		257 12
51 20	69 66	107 79	121 34	82 81	38 06		492 28
33 57	57 60	54 89	61 64	24 86		235 16	
2 12							
7,279 90	10,697 46	9,784 90	5,659 27	5,122 66	279 24	59,675 38	
389 99							

Total for year 1888..... \$321,433.93
 Total for year 1889..... 381,109.31

COMPARATIVE STATEMENT showing the Quantities of Vegetable Food and Lumber passed through the Canals during the Years ended 31st December, 1888 and 1889.

	VEGETABLE FOOD.							Lumber.	Total.
	Flour.	Wheat.	Corn.	Barley.	Oats.	Rye.	All other.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Welland Canal, 1888.....	16,983	160,963	194,886	5,906	26,629	811	13,608	59,604	479,390
do 1889.....	7,931	126,664	353,595	4,272	28,356	2,673	18,552	84,868	626,911
Increase.....	9,052	34,299	158,709	1,634	1,727	1,862	4,944	25,264	147,521
Decrease.....									
St. Lawrence Canals, 1888.....	9,830	117,766	82,194	1,563	1,743		22,975	61,166	297,237
do 1889.....	8,324	99,045	201,563	2,811	1,703	1,292	22,844	60,896	398,478
Increase.....	1,506	18,721	119,369	1,248		1,292			101,241
Decrease.....					40		131	270	
Chambly Canal, 1888.....	377			373	1,050	9	901	91,874	94,584
do 1889.....	252	3		1,078	1,370		433	81,665	84,801
Increase.....	125	3		705	320				
Decrease.....						9	468	10,209	9,783
Rideau Canal, 1888.....	432	326	92	275	17	15	229	59,780	61,166
do 1889.....	366	311	52	270	13	23	210	59,803	61,048
Increase.....	66	15	40	5	4	8		23	118
Decrease.....									
Ottawa Canals, 1888.....	23	40		471	1,088	2	1,902	533,206	536,732
do 1889.....	19	70	2	390	855	1	1,639	614,851	617,887
Increase.....									
Decrease.....									

SUPPLEMENTARY APPENDIX A.

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, and the Amount of Revenue collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl...		2										\$ cts.
Apples	20	699	4							112	112	22 40
Agricultural products not enumerated,									24	699	723	20 75
Vegetable												
Agricultural products not enumerated,				420						420	420	21 00
Animal												
Agricultural Implements.												
Barley				197					4,075	197	4,272	616 17
Bricks	20		4,075	4					20	4	24	2 03
Bones												
Brinestone.												
Cement and Water Lime.	1	6		49					50	6	56	7 63
Clay, Lime and Sand.	1	364	200						201	364	565	65 03
Coal.		435		226,352	1,124	14,463	25,931	240,815	27,490	268,305	268,305	53,181 95
Corn.					147,045	206,550			353,595	353,595	353,595	70,719 00
Cattle.												
Cotton (Raw).												
Crockery and Earthenware.	5	1			1				5	2	7	0 50
Dye Wood and Dye Stuffs.												
Fish.		5	9	156								
Flax and Hemp									165	5	170	25 75
Flour	9	2,019										
Furniture.	1		9		5,017	886			9	7,922	7,931	1,231 63
Gypsum.				1	30	4			11	34	45	8 48
Glass (all kinds).				623						623	623	7 79
Hay (Pressed).	1		1						2	2	2	0 30
Hogs												
Horses												
Hides and Skins, Horns and Hoofs.			2		1				2	3	5	0 90
Ice.	18								18		18	1 80
Iron.												
Iron, Railway	3		44						47		47	7 05

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 5.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, &c.—Continued.

Articles.	From Canadian Ports.		From Canadian to United States Ports.		From United States to Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hop Poles												\$ cts.
Lumber, sawn, in Vessels.	979	4,200		15,981		55,074		8,632	979	83,887	84,866	14,932 20
“ “ Rafts				2						2	2	0 22
Masts, Spars and Telegraph poles, in Vessels		215								215	215	32 25
Masts, Spars and Telegraph poles, in Rafts	5	5							5	5	10	1 25
Railway Ties, in Vessels		145		22				757	22	902	924	143 18
“ “ Rafts												
Saw Logs	239	2,111		2,587		158	7		246	4,856	5,102	215 88
Staves and Headings, barrel								4		4	4	0 46
“ “ pipe								506		506	506	94 49
“ “ West India								627		627	627	117 16
Staves, salt barrel										52	52	36 27
Shingles										17	17	6 36
Split Posts and Fence “ Rafts		17				51						
Timber square, in Vessels.												
“ “ Rafts		21,321		240				55,640		77,201	77,201	11,578 88
Traverses				6				2,920		2,926	2,926	657 09
Woodware and Wood partly manufactured												
						43	2		43	2	45	18 00
Total Freight paying Tolls	11,937	57,357	6,673	20,381	206,231	297,353	16,502	383,074	301,343	758,165	1,059,508	196,894 75
<i>Free Articles having paid full Tolls on the St. Lawrence Canals.</i>												
Agricultural Products, not enumerated, vegetable												
Bricks	9			19					19		19	
Cement and Water Lime				75					84		84	
Clay, Lime and Sand	9			814					823		823	
	3								3		3	

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 6.—GENERAL STATEMENT showing the Quantity of each Article of Through Freight transported on the Welland Canal, and the Amount of Tolls collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.		Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.				
												cts.	cts.	
Ashes, Pot and Pearl.		2									112			\$ 22 40
Apples.			4						4		4			0 60
Agricultural Products not enumerated, Vegetable.														
Agricultural Products not enumerated, Animal.														
Agricultural Implements.														
Barley.			4,075						4,075		4,075		61 25	611 25
Bricks.														
Bones.														
Brimstone.					49				49		49		7 35	7 35
Cement and Water Line.														
Clay, Lime and Sand.			200						200		200		30 00	30 00
Coal.					226,352		1,124	25,931	238,388		265,443		5,411 00	53,088 60
Corn.					147,045		12,036	206,550	353,595		353,595		70,719 00	70,719 00
Cattle.														
Cotton, Raw.														
Crockery and Earthenware.		1			1						2		0 40	0 40
Dye Wood and Dye Stuffs.														
Fish.		5	9		156									
Flax and Hemp.														
Flour.	2													
Furniture.			9		5,017			886	2	5,903	5,905		1 00	25 75
Gypsum.								4	10	34	44		0 30	1,180 90
Glass, all kinds.					1		30						1 50	8 30
Hay, Pressed.	1		1						2		2		0 30	0 30
Hogs.														
Horses.														
Hides and Skins, Horns and Hoofs.			2		1			2	2	3	5		0 30	0 90

SUPPLEMENTARY APPENDIX A—*Concluded.*No. (A) 6.—GENERAL. STATEMENT showing the Quantity of each Article of Through Freight transported, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.			Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		Up.	Down.		
														cts.	
Fire Wood, in Vessels.....											300	20 00			20 00
Lumber, sawn, in Vessels.....		2,155	300			55,074		8,632		300	81,842			14,721 59	14,721 59
Masts, Spars, and Telegraph Poles, in Vessels.....		215									215			32 25	32 25
Masts, Spars, and Telegraph Poles, in Rafts.....		5									5			1 00	1 00
Railway Ties, in Vessels.....		95						757			852			135 99	135 99
" " Rafts.....															
Saw Logs.....						158					158			14 40	14 40
Staves and Headings, barrel pipe.....								4			4			0 46	0 46
Staves and Headings, West India.....								506			506			94 49	94 49
Staves, salt barrel.....											627			117 16	117 16
Shingles.....						51					51			36 12	36 12
Split Posts and Fence Rails, in Vessels.....	17										17			6 36	6 36
Split Posts and Fence Rails, in Rafts.....															
Timber square, in Vessels.....		21,321			240			55,640			77,201			11,578 88	11,578 88
" " Rafts.....								2,920			2,920			656 65	656 65
Traverses.....															
Woodenware and Wood partly manufactured.....						43	2			43	2			17 20	17 20
Total Freight paying Tolls.....	801	36,751	6,614	16,221	266,231	297,853	380,706	12,036	285,682	731,031	1,016,713	54,159 76		140,513 89	194,673 65
<i>Free Articles having paid full Tolls on the St. Lawrence Canals:—</i>															
Agricultural products not enumerated, Vegetable.....											19				

Bricks.....	91	75						84	84
Cement, and Water Lime.....	9	814						823	
Clay, Lime and Sand.....	3							3	
Crockery and Earthenware.....		112						112	
Cattle.....									
Fish.....		80						80	
Furniture.....									
Glasses, all kinds.....	1	70						71	
Horses.....	1	1						2	
Iron, Railway.....	14,784	729						15,513	
" Pig.....	78	172						250	
" All other.....	54	236						290	
Molasses.....		56						56	
Nails.....	268	468						736	
Oil, in Barrels.....	4	5						9	
Paint.....	20	29						49	
Salt.....	65	4,151						4,216	
Seeds, all kinds.....		215						215	
Soda Ash.....		766						766	
Steel.....		3						3	
Sugar.....	4	3						7	
Spirits, Beer, etc.....	12	112						124	
Tin.....	57	423						480	
Turpentine.....	1	1						1	
White Lead.....	2	2						4	
Whiting.....	21	12						33	
All other Merchandise, not enumerated.....	262	1,160						1,422	
Barrels, Empty.....		2						2	
Grand Total, Freight.....	16,456	16,329	16,221	266,231	297,353	12,036	380,706	311,052	731,031
									1,042,083

Total Through Tolls on Vessels.....	8,714 97	9,085 58	17,800 55
" Passengers.....	40 80	54 35	95 15
" Free Goods.....			\$3,805 52
Total Through Tolls.....	62,915 53	149,653 82	212,569 35

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 19th May, 1890.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 7.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the Welland Canal, and the Amount of Tolls collected during the Season of Navigation, in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl												
Apples	20	699							20	699	719	20 15
Agricultural Products, not enumerated,												
Vegetable				420						420	420	21 00
Agricultural Products, not enumerated,												
Annual												
Agricultural Implements.												
Barley				197						197	197	4 92
Bricks	20			4					20	4	24	2 03
Bones												
Brimstone												
Cement and Water Lime	1	6							1	6	7	0 28
Clay, Lime and Sand	1	364							1	364	365	35 03
Coal		435					2,427		2,427	435	2,862	93 35
Corn												
Cattle												
Cotton, Raw												
Crockery and Earthenware	5								5			
Dye Wood and Dye Stuffs.												
Fish												
Flax and Hemp												
Flour	7	2,019							7	2,019	2,026	50 73
Furniture	1								1		1	0 18
Gypsum				623						623	623	7 79
Glass, all kinds.												
Hay, Pressed												
Hogs												
Horses												
Hides and Skins, Horns and Hoofs.	18								18		18	1 80
Ice												
Iron, Railway												

" Pig.....	3	58	210	156	15	58	15	3	3	0 06
" all other.....										
Iron Ore.....										
Kryolite Chemical Ore and other Ore, except Iron.....										
Lard and Lard Oil.....	15							15		1 13
Meal, all kinds.....										
Meats, other than Pork.....										
Marble.....										
Manilla.....										
Molasses.....	58									
Nails.....		544								
Oats.....	5	1								
Oil (in Barrels).....										
Oil Cake.....										
Pease.....	240		210							
Potatoes.....										
Pork.....	4									
Paint.....										
Pitch and Tar.....										
Rags.....										
Rye.....										
Rosin.....	19									
Salt.....			23							
Stone intended for Cutting.....										
" wrought.....										
" not suitable for Cutting, unwrought.....	886									
Seeds, all kinds.....										
Sheep.....										
Soda Ash.....										
Steel.....										
Sugar.....	146									
Spirits, Beer, &c.....		2								
Tobacco (Raw).....										
Tallow.....										
Tin.....										
Turpentine.....										
Wheat.....	4,290	873								
White Lead.....										
Whiting.....										
Wool.....										
All other Goods and Merchandise not enumerated.....	514	309	4							
Bark.....										
Barrels, Empty.....			10							
Boat Knees.....										
Boats.....										
Floats.....										
Firewood, in Vessels.....	3,660	11,148								
" Rafts.....										
Hoops.....										

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 7.—GENERAL STATEMENT showing the Quantity of each Article transported on the Welland Canal, &c.—Concluded.

ARTICLES.	From Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Hop Poles	979	2,045							979	2,945	3,024	210 61
Lumber, sawn, in Vessels.										2	2	0 22
“ Rafts	5			2								
Masts, Spars and Telegraph Poles, in Rafts									5		5	0 25
Railway Ties, in Vessels.		50	22						22	50	72	7 19
“ Rafts												
Saw Logs	239	2,111		2,587	7				246	4,698	4,944	201 48
Shingles				1						1	1	0 15
Timber square, in Rafts				6						6	6	0 44
Traverses												
Woodenware and Wood partly manufactured.												
Total Freight paying Tolls	11,136	20,606	59	4,160			4,406	2,368	15,661	27,134	42,795	2,221 10
Timber passed Free from Welland to Port Robinson		395								395	395	
Grand Total Freight.	11,136	21,001	59	4,160			4,406	2,368	15,661	27,529	43,190	
Total Way Tolls on Vessels.												846 80
“ “ Passengers.												48 63
“ “ Free Goods												\$18 88
Total Way Tolls.												3,116 53

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 19th May, 1890.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, and the Amount of Revenue collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.		88							26	88	114	\$ cts.
Apples.	15	2,536			26			1		2,537	2,552	20 20
Agricultural products not enumerated, Vegetable.	264	85	19				33		316	85	2,552	372 65
“ “ Animal	53	924							53	924	977	52 42
Agricultural Implements.	92	26							92	26	118	135 57
Barley	1,312	1,496					3		1,315	1,496	2,811	18 12
Bricks	8,169	169	68				472		8,709	169	8,878	56 93
Bones	24	94		329					24	423	447	367 90
Brimstone.							30		30		30	59 59
Cement and Water Lime.	4,826	132	734						5,560	132	5,692	1 13
Clay, Lime and Sand.	18,540	3,588					4,762		23,302	3,588	26,890	614 63
Coal.		53,098			20	1,171			20	146,904	146,924	1,071 43
Corn.	23	2,678				40			23	2,774	20,141	85
Cattle.	37	358		9					37	367	2,797	32 07
Cotton, Raw.												
Crockery and Earthenware.	128	16	111				2		241	18	259	49 66
Dye Wood and Dye Stuffs	40	20					106		146	20	166	11 87
Fish.	394	200	72		8				674	200	874	79 72
Flax and Hemp												
Flour	668	549			12	113			680	663	1,343	115 69
Furniture.	144	381							144	381	525	96 75
Gypsum.	2,440	363							2,440	363	2,803	55 07
Glass, all kinds.	375	35	8		2				387	37	434	81 14
Hay, Pressed.	1,113	610			81				1,194	610	1,804	88 31
Hogs.	1	17							1	17	18	2 59
Horses.	115	249	1		1				117	249	366	26 69
Hides and Skins, Horns and Hoofs.	1	23	1						2	26	28	4 00
Ice.												
Iron, Railway.	15,814	160	534						16,348	160	16,508	2,408 55
“ Pig.	4,945	40	172			10		140	5,257	50	5,307	762 86
“ all other.	17,448	1,334	220	9			28		17,677	1,362	19,039	945 49

SUPPLEMENTARY APPENDIX A.—*Concluded.*

No. (A) 8.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Lawrence Canals, etc.—*Con.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Lumber in Vessels	151	3,628										
“ Rafts		237							151	6,048	6,199	\$ cts.
Stoves Pipe		202					2,420			237	237	
“ West India		68								202	202	
Timber, Square in Rafts		9,302								68	68	
Woodenware										9,302	9,302	
Coal, free per Order in Council	54,304		119		47,537				101,960		101,960	
Clay, Lime and Sand, free per Order in Council	589	129			80				669	129	798	
Stone for Cutting	200								200		200	
“ unwrought not suitable for cutting, free per Order in Council												
Floats, free per Order in Council	580	9,000								9,000	9,000	
Kryolite, free, having paid full tolls on Rideau Canal		10							580	10	580	
Grand Total, Freight.	222,956	521,704	10,389	700	993	2,838	64,613	95,679	298,951	620,921	919,872	
Total Tolls on Vessels.												15,824 69
“ Passengers.												2,502 85
“ Free Goods												\$14,550 25
Fines and Damages												175 00
Wharfage and Storage												5,606 69
Other Receipts.												9,556 88
Total Revenue Exclusive of Hydraulic Rents												73,293 54

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, MAY 19TH 1890.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article of through freight transported on the St. Lawrence Canals, and the Amount of Tolls collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Amount of Toll, Up.	Amount of Tolls, Down.	Total Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			
Ashes, Pot and Pearl.		80							80			\$ cts.	\$ cts.
Apples.		2,453							2,453			16 00	16 00
Agricultural Products, not enumerated, Vegetable.	258		19									367 95	367 95
Agricultural Products, not enumerated, Animal.	3								277		41 55	6 75	48 30
Agricultural Implements.		793							3	793	0 45	118 95	119 40
Barley.		20							20	20		4 00	4 00
Bricks.	150	1,130	68							1,130		22 60	22 60
Bones.		86							218	86	32 70	12 90	32 70
Brimstone.													12 90
Cement and Water Lime.	1,652	5	734						2,386	5	357 90	0 75	358 65
Clay, Lime and Sand.	30	331							30	331	4 50	49 65	54 15
Coal.		49,512								124,290		18,604 90	18,604 90
Corn.		2,491								2,491		49 82	49 82
Cattle.		38		9					47	47		7 05	7 05
Cotton, Raw.													
Crockery and Earthenware.	52	16	111					2	103	18	32 60	3 60	36 20
Dye Wood and Dye Stuffs.	13								13	13	2 60	2 60	2 60
Fish.	239	17	72		8				319	17	47 85	2 55	50 40
Flax and Hemp.													
Flour.		328											
Furniture.	36	360											
Gypsum.													
Glass, all kinds.	342	14	8					2	36	328	7 20	49 20	49 20
Hay, Pressed.										360		72 00	72 00
Hogs.									350	16	70 00	3 20	73 20
Horses.		17											
Hides and Skins, Horns and Hoofs.	13	31	1						14	17		2 55	2 55
										31	2 10	4 65	6 75
		21	1					8	1	24	0 15	3 60	3 75

No. (A) 9.—GENERAL STATEMENT showing the Quantity of Each Article Transported, &c.—Continued.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.		Amount of Tolls Up.		Amount of Tolls Down.		Total Amount of Tolls.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			\$	cts.	\$	cts.	\$	cts.
Ice.....																		
Iron, Railway.....	15,345		534						15,879		15,879		2,381	85			2,381	85
" Pig.....	4,721		172						4,893		4,893		733	95			733	95
" all other.....	1,468	29	220						1,688	29	1,717		253	20	4	35	257	55
" Ore.....																		
Kryolite, Chemical Ore and other Ore, except Iron.....		2,566								2,566	2,566				128	30	128	30
Lard and Lard Oil.....	5	7							5	7	12		0	75	1	05	1	80
Meal, all kinds.....	1	176							1	176	177		0	15	26	40	26	55
Meats, other than Pork.....	1	9							1	9	10		0	15	1	35	1	50
Marble.....	10								10		10		2	00			2	00
Mamilla.....																		
Molasses.....	120		56						176		176							
Nails.....	1,960	7	291						2,251	7	2,258		450	20	1	40	451	60
Oats.....		25							25		25				3	36	3	36
Oil, in barrels.....	370	150	3						373	150	523		74	60	30	00	104	60
Oil Cake.....																		
Pease.....		3,183																
Potatoes.....	17									3,183	3,183				66	91	66	91
Pork.....	55								17		17				2	55	2	55
Paint.....	142	43	23				3		58	58	58				8	70	8	70
Pitch and Tar.....	161	67							165	43	208		33	00	8	00	41	00
Rags.....	5	24							101	67	168		20	20	13	40	33	60
Rye.....		8							5	24	29		1	00	4	80	5	80
Rosin.....	21									8	8				1	20	1	20
Salt.....	1,842		3,878						21		21		4	20			4	20
Stone intended for Cutting.....	9	1,374							5,720		5,720		858	00			858	00
" wrought.....	17	50							9	1,374	1,383		1	35	206	10	207	45
" not suitable for Cutting, unwrought.....									17	50	67		3	40	10	00	13	40
Seeds, all kinds.....	192									672	672				55	80	55	80
Sheep.....		19	215						407	19	417		61	05	1	50	62	55
Soda Ash.....	670		771						1,441	19	1,441		288	20	2	85	288	20
Steel.....	332		3						335		335		51	65			51	65
Sugar.....	2,079	13	3						2,082	13	2,095		416	40			419	00

Spirits, Beer, &c.	209	393	111			7	320	400	720	64 00	80 00	144 00
Tobacco, Raw.		1				2		3	3		0 45	0 45
Tallow	36						36		36	5 40		5 40
Tin	274	8	423				697	8	705	139 40	1 60	141 00
Turpentine	22						22		22	4 40		4 40
Wheat	190	618					190	618	808	28 50	12 49	40 99
White Lead	88		1				89		89	17 80		17 80
Whiting	411						411		411	82 20		82 20
Wool	3	2					3	2	5	0 45	0 30	0 75
All other Goods and Merchandise not enumerated	4,006	1,782	971			59	4,977	1,841	6,818	995 40	368 20	1,363 60
Bark												
Barrels, Empty	60	61	6				66	61	127	11 82	12 08	23 90
Boat Knives												
Floats												
Fire Wood, in Vessels		1,089						1,089	1,089		69 35	69 35
Rafts												
Hoops												
Hop Poles												
Lumber, Sawm, in Vessels	9	5,108		824			9	5,932	5,941	0 75	607 80	608 55
Rafts												
Masts, Spars, and Telegraph Poles, in Vessels												
Staves and Headings, Barrel		22						22	22		3 30	3 30
" " " W. India												
Staves, Salt Barrel		10	16				16	10	10		0 80	0 80
Shingles									16	10 98		10 98
Split Posts and Fence Rails, in Vessels												
Split Posts and Fence Rails, in Rafts												
Timber, Square, in Vessels	92						92		92	4 60		4 60
Rafts												
Traverses												
Woodenware and Wood partly manufactured	61	17				1	61	18	79	24 40	7 20	31 60
Total Freight paying Tolls	37,660	75,403	8,711	8	9	74,857	46,379	151,093	197,472	7,060 20	21,147 46	28,807 66
<i>Free Articles having paid Full Tolls on the Welland Canal.</i>												
Ashes		107						107	107			
Corn		195,350						195,350	195,350			
Flour		6,841						6,841	6,841			
Horses		2						2	2			
Meals, all kinds		148						148	148			
Meats, other than Pork		32						42	32			
Oats		320						320	320			

No. (A) 9.—GENERAL STATEMENT showing the Quantity of each Article of through freight transported, &c.—*Concluded.*

Articles.	From Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Amount of Tolls, Up.		Amount of Tolls, Down.		Total Amount of Tolls.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	cts.	cts.	cts.	cts.	cts.	cts.
Oil.....		4								4						
Oil Cake.....		798								798						
Pork.....		1,177						43		1,220						
Rye.....		1,284								1,284						
Seeds, all kinds.....		3								3						
Spirits, Beer, &c.....		20								20						
Wheat.....		70,510						305		70,815						
Merchandise, not enumerated..		138								138						
Lumber, Saw'n, in Vessels.....		3,461						2,420		5,881						
" " Rafts.....		237								237						
Staves and Headings, Pipes.....		202								202						
" " W. India.....		68								68						
Lumber, Square, in Rafts.....		9,302								9,302						
Coal, Free, per Order in Council		5,349								5,360						
Kryolite, Free, having paid full Tolls on Rideau Canal.....		10								10						
Freight—Grand Total.....	43,009	365,472	8,722	9	8	824		77,625	51,739	443,930						
Total Through Tolls on Vessels.....																
" " Passengers.....																
" " Free Goods..... \$9,071 34																
Total Through Tolls.....																
												12,875 58	27,275 12		40,150 70	

B. H. TEAKLES,
Chief Clerk Canals Revenue.

INLAND REVENUE DEPARTMENT,
OTTAWA, 19th May, 1890.

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 10.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported on the St. Lawrence Canals, and the Amount of Tolls collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.		8			26				26	8	34	\$ cts. 4 20
Apples	15	83						1		15	84	99 4 70
Agricultural Products, not enumerated.	6	40							39	40	79 4 12	
“ “ “ Animal.	50	131					33		50	131	181 16 17	
— Agricultural Implements.	92	6							92	6	98 14 12	
Barley	1,312	366					3		1,315	366	1,681 34 33	
Bricks	8,019	169					472		8,491	169	8,660 335 20	
Bones.	24	8		329					24	337	361 46 69	
Brimstone.							30		30		30 1 13	
Cement and Water Lime.	3,174	127							3,174	127	3,301 255 98	
Clay, Lime and Sand.	18,510	3,257					4,762		23,272	3,257	26,529 1,017 28	
Coal		3,581		1,171	20			17,862	20	22,614	22,634 1,536 45	
Corn	23	187		40				56	23	283	306 8 77	
Cattle.	37	320							37	320	357 25 02	
Crockery and Earthenware.	76	27					2		78		78 13 46	
Dye Wood and Dye Stuffs.	27	20					106		133	20	153 9 27	
Fish.	355	183							355	183	538 29 32	
Flour.	668	221		113	12			1	680	335	1,015 66 49	
Furniture.	108	21							108	21	129 17 55	
Gypsum.	2,440	363							2,440	363	2,803 55 07	
Glass, all kinds.	33	21			2		12		47	21	68 7 94	
Hay, Pressed.	1,113	610			81				1,194	610	1,804 88 31	
Hogs.	1								1		1 0 04	
Horses.	102	218			1				103	218	321 19 94	
Hides and Skins, Horns and Hoofs.	1	2							1	2	3 0 25	
Iron, Railway.	469	160							469	160	629 26 70	
“ Pig	224	40		10			140		364	50	414 28 91	
“ all other.	15,980	1,305			9			28	15,989	1,333	17,322 687 94	
Kryolite, Chemical Ore and other Ore, except Iron.		2								2	2 0 10	
Lard and Lard Oil.	26	1							26	1	27 2 56	

No. (A) 10.—GENERAL STATEMENT showing the Quantity of each Article of Way Freight transported, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Meal, all kinds.....	50	647							50	647	697	\$ 30 23
Meats, other than Pork.....	10	20							10	20	30	1 81
Marble.....	2						27		29		29	1 73
Manilla.....										1	1	0 05
Molasses.....	273	25					2,586		2,859	25	2,884	172 00
Nails.....	448	531					448		531	531	979	101 09
Oats.....	586	757	5	5				5	596	762	1,358	64 43
Oil in barrels.....	355	85	22	2	14	92	445	68	836	247	1,083	87 69
Oil Cake.....	15								15		15	1 44
Pease.....	892	14,987							892	14,987	15,879	318 30
Potatoes.....	25	165						1	25	166	191	13 49
Pork.....	207	221						9	207	230	437	29 86
Paint.....	15	120					15		30	129	159	9 42
Pitch and Tar.....	17	52					1,159		1,176	52	1,228	63 64
Rags.....	149	5							149	5	154	15 40
Rosin.....	15	69					1,303		1,318	69	1,387	70 37
Salt.....	2,104	16	1		16				2,105	32	2,137	191 47
Stone, intended for Cutting.....	2,228	4,201					3,014		5,242	4,201	9,443	515 52
“ wrought.....	188	2							188	2	190	10 20
“ not suitable for Cutting, unwrought.....	1,176	549							1,176	549	1,725	34 50
Seeds, all kinds.....	8,964	1,230					3		8,964	1,233	10,197	383 23
Sheep.....	3	110							3	110	113	8 64
Soda Ash.....	63	40							63	40	103	9 38
Steel.....	14	2							14	2	16	2 16
Sugar.....	740	1					2,584		3,324	1	3,325	224 87
Spirits, Beer, &c.....	274	11						4	274	15	289	40 44
Tallow.....	2						100		102		102	3 96
Tin.....	58	83							58	83	141	13 72
Turpentine.....	1	9					203		204		213	10 65
Wheat.....	24,690	2,701							24,690	2,702	27,392	547 92
White Lead.....	11	2							11	2	13	2 10
Whiting.....	24	12							24	12	36	4 98
Wool.....	5								5		5	0 19
All other Goods and Merchandise not enumerated.....	2,976	856	10	737	563	6			3,723	1,425	5,148	486 76

Barrels, Empty.....	36	15	41	69	9	146	33	179	14 26
Floats.....	610	5,208	600	610	5,208	5,818	101 99
Fire Wood, in Vessels.....	3,009	6,126	3,609	6,126	9,735	211 63
" Rafts.....	6	6	6	25
Hoops.....	9	9	9	90
Lumber, Sawm, in Vessels.....	22,580	24,577	614	360	23,194	24,937	48,131	1,244 11
" Rafts.....	205	205	205	8 37
Masts, Spars, and Telegraph Poles, in Vessels.....	17,936	17,936	17,936	17,936	448 40
" Rafts.....	6,046	256	1,244	6,046	6,046	151 15
Railway Ties, in Vessels.....	988	1,244	24 89
Saw Logs.....	19,491	19,491	19,491	445 46
Staves, West India.....	186	186	186	6 99
Shingles.....	27	63	27	63	90	18 70
Split Posts and Fence Rails, in Vessels.....	1	10	11	11	1 10
Timber, Square, in Vessels.....	400	2,098	400	2,098	2,498	35 37
" Rafts.....	2,302	6,246	2,302	6,246	8,548	230 70
Traverses.....	12,508	12,508	12,508	32 55
Woodenware and Wood partly manufactured.....	23	85	23	85	108	12 80
Total Freight paying Tolls.....	129,447	139,759	1,559	985	2,014	148,987	160,518	309,505	10,819 77
Coal, Free, per Order in Council.....
Corn, Free, having paid full Toll on Welland Canal.....	48,955	4,417	108	96,600	4,417	96,600
Wheat.....	30	30	30
FLOUR.....	140	140	140
Stone, Unwrought, Free, per Order in Council.....	9,000	9,000	9,000
do for cutting.....	200	200	200
Lumber.....	151	167	151	167	318
Cement and Water Lime.....	29	29	29
Clay, Lime and Sand.....	589	129	80	669	129	198
Merchandise.....	25	25	25
Stone, Wrought.....	2,561	2,561	2,561
Floats.....	580	580	580
Grand Total, Freight.....	179,947	156,232	1,667	985	2,014	247,212	176,991	424,203
Total Way Tolls.....									
Total Way Tolls on Vessels.....									
" Passengers.....	6,126 00
" Free Goods.....	858 50
" 	83,478 91
Total Way Tolls.....									
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	24						24	24	2 29
" all other									
Iron Ore							1,248	1,248	64 74
Kryolite Chemical Ore and other, Ore, except Iron.									
Lard and Lard Oil							9	9	0 89
Meat, all kinds							1	1	0 18
Meats, other than Pork									
Marble									
Manilla							2	2	0 38
Molasses									
Nails							854	854	53 42
Oats	1						4	4	0 38
Oil, in barrels									
Oil Cake							1,386	1,386	91 22
Pease							301	301	24 34
Potatoes							5	5	0 46
Pork	1								
Paint									
Pitch and Tar							6	6	1 05
Rags							1	1	0 10
Rye									
Rosin									
Salt									
Stone, intended for Cutting	250						250	250	5 30
" wrought									
" not suitable for Cutting, unwrought.	90						90	90	0 96
Seeds, all kinds							14	14	1 35
Sheep							279	279	19 77
Soda Ash									
Steel									
Sugar							5	5	0 95
Spirits, Beer, &c.							1	1	0 19
Tobacco, Raw									
Tallow							3	3	0 22
Tin									
Turpentine									
Wheat							70	70	5 76
White Lead									
Whiting									
Wool									
All other Goods and Merchandise not enumerated.	23						274	297	41 76
Back							13	13	1 27
Barrels, Empty							63	63	7 75
Boat Knees									
Floats	30						30	8,880	81 20
Fire Wood, in Vessels								38,829	1,561 39
" Rafts								6,762	92 02
Hoops							13	13	1 17
Hop Poles									
Lumber, sawn, in Vessels							610,932	610,932	48,506 06
" Rafts							3,919	3,919	45 11

No. (A) 11.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Railway Ties, in Vessels.....		1,410								1,410	1,410	\$ cts.
“ “ Rafts.....		823								823	823	136 59
Saw Logs.....		6,826								6,826	6,826	38 67
Staves and Headings, barrel.....												156 00
“ “ Pipe.....												
“ “ West India.....												
Staves, salt barrel.....												
Shingles.....		122								432	432	343 53
Split Posts and Fence Rails, in Vessels.....		3		310						3	3	0 66
“ “ Rafts.....												
Timber Square, in Vessels.....		1,730								1,730	1,730	43 98
“ “ Rafts.....												
Traverses.....	22								22		22	4 40
Woodenware and Wood partly manufactured.....												
Total Freight paying Tolls.....	443	516,784		177,416			128		571	694,200	694,771	51,743 95
Timber, &c., Free, per Order in Council.....		52,302								52,302	52,302	
Grand Total Freight.....	443	569,086		177,416			128		571	746,502	747,073	
Total Tolls on Vessels.....												5,026 96
“ “ Passengers.....												190 64
“ “ Free Goods.....												\$439 31
“ “ Fines and Damages.....												
“ “ Other Receipts.....												
Total Revenue, Exclude of Hydraulic Rents.....												\$56,961 55

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 19th May, 1890.

B. H. TEAKLES.

Chief Clerk Canals Revenue.

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported on the Chambly Canal and the Amount of Revenue collected during the Season of Navigation in 1889.

Articles.	From Canadian Ports.		From Canadian to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Asles, Pot and Pearl										\$ cts.
Apples		154							399	36 68
Agricultural products not enumerated, Annual		11				243			11	0 37
"		12							12	0 40
Agricultural Implements										
Barley		567							567	52 99
Bricks	77		511			730			807	74 54
Bones										
Brimstone										
Cement and Water Lime						18			18	1 80
Clay, Lime and Sand	714					264			264	26 40
Coal		36				5,095	714		5,809	580 32
Corn						104,394	104,430		104,430	10,262 25
Cattle		39							39	1 30
Cotton, Raw										
Crockery and Earthenware		10							10	1 00
Dye Wood and Dye Stuffs						58			58	5 80
Fish										
Flax and Hemp										
Flour	252									
Furniture		2								
Gypsum										
Glass, all kinds										
Hay, pressed	53	871		489			252	2	252	8 40
Hogs									2	0 20
Horses										
Hides and Skins, Horns and Hoofs		33							33	1 10
Ice										
Iron, Railway										
" Pig										
						140			140	14 00

No. (A) 12.—GENERAL STATEMENT showing the Quantity of each Article transported, &c.—*Concluded.*

Articles.	From Canadian to Canadian Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Iron, all other										\$ cts.
Iron Ore					25			25	25	2 50
Kryolite Chemical Ore and other Ore, except Iron.										
Lard and Lard Oil										
Meal, all kinds										
Meats, other than Pork										
Marble										
Manilla										
Molasses						2,799		2,799	2,799	307 57
Nails										
Oats		1,370						1,370	1,370	45 71
Oil, in barrels		7				484		491	491	48 60
Oil Cake										
Pease										
Potatoes		31						31	31	1 04
Pork	3						3		3	30
Paint										
Pitch and Tar						8		8	8	80
Rags						1,248		1,248	1,248	124 80
Rye										
Rosin										
Salt						1,373		1,373	1,373	137 30
Stone intended for Cutting		61				1,685		1,746	1,746	172 57
“ wrought						264		264	264	26 60
“ not suitable for Cutting, unwrought.						146		146	146	14 60
Seeds, all kinds.										
Sheep.	6	123					6	123	129	4 30
Soda Ash.									283	23 70
Steel						283		283	283	11 00
Sugar						110		110	110	245 20
Spirits, Beer, &c.						2,452		2,452	2,452	
Tobacco, Raw										
Tallow										
Tin						17		17	17	1 70

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 13.—GENERAL STATEMENT showing the Quantity of each Article transported on the Rideau Canal and the Amount of Revenue collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
Ashes, Pot and Pearl.	6								6		6	\$ cts.
Apples.	2	16							2	16	18	52
Agricultural products not enumerated, Vegetable.	5	3							5	3	8	43
Animal.	472	108							472	108	580	24
Barley.	69	79							69	79	148	14 25
Bricks.	270								270		270	14 26
Bones.	431	49							431	49	480	6 40
Breeds.	1	23							1	23	24	11 28
Brunstone.												77
Cement and Water Lime.	246	11							246	11	257	6 25
Clay, Lime and Sand.	299	5							299	5	304	7 14
Coal.		10,356								10,356	10,356	461 88
Corn.		52								52	52	1 55
Cattle.	3	3							3	3	6	16
Cotton, Raw.												
Crockery and Earthenware.	31	5							31	5	36	3 42
Dye Wood and Dye Stuffs.		2								2	2	18
Fish.	80	3							80	3	83	2 11
Flax and Hemp.	1										1	03
Flour.	58	308							58	308	366	10 20
Furniture.	30	20							30	20	50	4 82
Gypsum.												
Glass, all kinds.	33	1							33	1	34	3 04
Hay, pressed.	132	2							132	2	134	3 21
Hogs.												
Hides and Skins, Horns and Hoofs.	8	8							8	8	16	48
Ice.	1								1		1	03
Iron, Railway.	5	52							5	52	57	1 34
" Pig.	160								160		160	6 10

" all other.	364	36	364	36	364	36	364	36	400	10 32
Iron Ore.....	36	1,164	36	1,164	36	1,164	36	1,164	1,200	60 00
Kryolite Chemical Ore and other Ore, except Iron.	24	1	24	1	24	1	24	1	25	0 75
Lard and Lard Oil.....	28	24	28	24	28	24	28	24	52	1 50
Meal, all kinds.....	5	2	5	2	5	2	5	2	7	0 17
Meats, other than Pork.....	6	2	6	2	6	2	6	2	8	0 71
Marble.....	76	11	76	11	76	11	76	11	87	7 74
Manilla.....	309	2	309	2	309	2	309	2	309	27 77
Molasses.....	11	155	11	155	11	155	11	155	13	0 33
Nails.....	53	6	53	6	53	6	53	6	208	19 10
Oats.....	15	6	15	6	15	6	15	6	10	0 28
Oil, in Barrels.....	82	37	82	37	82	37	82	37	21	0 52
Oil Cake.....	76	39	76	39	76	39	76	39	119	3 20
Pease.....	7	7	7	7	7	7	7	7	115	3 42
Potatoes.....	18	6	18	6	18	6	18	6	7	0 72
Pork.....	23	2	23	2	23	2	23	2	18	1 60
Paint.....	813	132	813	132	813	132	813	132	23	0 57
Pitch and Tar.....	177	144	177	144	177	144	177	144	2	0 18
Rags.....	413	1,010	413	1,010	413	1,010	413	1,010	945	32 22
Rye.....	20	2	20	2	20	2	20	2	321	11 22
Rosin.....	2	2	2	2	2	2	2	2	3	0 36
Salt.....	36	1	36	1	36	1	36	1	1,423	30 63
Stone, intended for Cutting.....	14	1	14	1	14	1	14	1	22	0 70
" wrought.....	206	65	206	65	206	65	206	65	2	0 05
" not suitable for Cutting, unwrought.....	126	39	126	39	126	39	126	39	36	3 13
Seeds, all kinds.....	6	2	6	2	6	2	6	2	15	0 53
Sheep.....	26	2	26	2	26	2	26	2	331	30 86
Soda Ash.....	311	311	311	311	311	311	311	311	165	14 93
Steel.....	2	2	2	2	2	2	2	2	1	0 03
Sugar.....	36	1	36	1	36	1	36	1	6	0 16
Spirits, Beer, &c.....	26	2	26	2	26	2	26	2	28	2 67
Tobacco, Raw.....	311	311	311	311	311	311	311	311	311	7 88
Tallow.....	20	2	20	2	20	2	20	2	20	1 79
Tin.....	46	46	46	46	46	46	46	46	46	4 02
Turpentine.....	1	1	1	1	1	1	1	1	1	0 03
White Lead.....	549	347	549	347	549	347	549	347	896	86 71
Whiting.....	19	19	19	19	19	19	19	19	76	3 56
Wool.....	2,996	30	2,996	30	2,996	30	2,996	30	19	1 50
All other Goods and Merchandise not enumerated.	13,092	830	13,092	830	13,092	830	13,092	830	3,026	53 62
Barrel.....	39,589	13	39,589	13	39,589	13	39,589	13	13,422	254 65
Barrels, Empty.....	93	93	93	93	93	93	93	93	93	13 50
Beat, Knees.....	7,779	13	7,779	13	7,779	13	7,779	13	59,722	2,669 36
Floats.....	12,354	12,354	12,354	12,354	12,354	12,354	12,354	12,354	81	6 47
Fire Wood, in Vessels.....	39,589	13	39,589	13	39,589	13	39,589	13	93	13 50
" Rafts.....	7,779	13	7,779	13	7,779	13	7,779	13	59,722	2,669 36
Hoops.....	13	13	13	13	13	13	13	13	81	6 47
Hop Poles.....	13	13	13	13	13	13	13	13	81	6 47
Lumber, sawn, in Vessels.....	13	13	13	13	13	13	13	13	81	6 47
" " Rafts.....	13	13	13	13	13	13	13	13	81	6 47

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 14.—GENERAL STATEMENT showing the Quantity of each Article transported on the St. Peter's Canal, and the Amount of Revenue collected during the Season of Navigation in 1889.

Articles.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.	
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.			
												\$ cts.	
Fish.....	89	909							89	909	998	9 98	
Flour.....	930	575							930	575	1,505	15 05	
Coal.....	2,316	21,233							2,316	21,233	23,549	235 49	
Lumber.....	5,180	1,946							5,180	1,946	7,126	71 26	
Other Agricultural Products	13,729	7,295							13,729	7,295	21,024	210 24	
Other Merchandise.....	936	305							936	305	1,241	12 41	
Total Freight paying Tolls.	23,180	32,263							23,180	32,263	55,443	554 43	
Total Tolls on Vessels.....													2,365 24
“ “ Passengers.....												
Total Revenue, Exclusive of Hydraulic Rents.....													2,919 67

DEPARTMENT OF RAILWAY AND CANALS,
OTTAWA, MAY 19TH 1890.

B. H. TEAKLES,
Chief Clerk Canals Revenue.

SUPPLEMENTARY

No. (A) 16.—STATEMENT OF TRAFFIC on the undermentioned Canals and

ARTICLES.	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 1.</i>		\$ cts.		\$ cts.
Canadian Vessels, steam	287,127	3,844 99	650,323	3,965 55
United States Vessels, steam.....	342,804	5,149 06	20,231	141 99
Canadian Vessels, sail.....	278,819	5,543 28	1,005,779	11,030 05
United States Vessels, sail	183,196	4,110 02	81,169	687 10
Total, Class No. 1.....	1,091,946	18,647 35	1,757,502	15,824 69
<i>Class No. 2.</i>	No.		No.	
Passengers	4,671	143 78	49,250	2,502 85
<i>Class No. 3.</i>	Tons.		Tons.	
Bricks	24	2 03	8,878	367 90
Brimstone.....			30	1 13
Cement and Water Lime.....	56	7 63	5,692	614 63
Clay, Lime and Sand.....	565	65 03	26,890	1,071 43
Fish.....	170	25 75	874	79 72
Gypsum.....	623	7 79	2,803	55 07
Iron, Railway	47	7 05	16,508	2,408 55
“ Pig.....	627	124 70	5,307	762 86
“ all other.....	1,852	303 41	19,039	945 49
Steel.....			132	19 80
Salt.....	1,254	198 69	7,857	1,049 47
Stone, for cutting.....	6,784	1,356 80	10,826	722 97
Apples.....	723	20 75	2,552	372 65
Barley.....	4,272	616 17	2,811	56 93
Corn.....	353,595	70,719 00	2,797	58 59
Cotton, Raw.....				
Flax and Hemp.....				
Flour.....	7,931	1,231 63	1,343	115 69
Hay, Pressed.....			1,604	88 31
Meals, all kinds.....	17,378	3,473 73	874	56 78
Oil Cake.....	798	159 60	15	1 44
Oats.....	28,356	5,668 23	1,383	67 79
Pease.....	450	25 50	19,062	385 21
Potatoes	1	0 20	208	16 04
Rye.....	2,673	496 85	8	1 20
Seeds, all kinds.....	154	30 80	10,614	445 78
Tobacco, Raw			3	0 45
Wheat.....	126,664	24,173 92	28,200	588 91
All other Agricultural Products, Vegetable.....	420	21 00	401	52 42
Bones.....			447	59 59
Cattle.....			404	32 07
Hogs.....			18	2 59
Hides and Skins, Horns and Hoofs.....	18	1 80	28	4 00
Horses.....	5	0 90	366	26 69
Lard and Lard Oil.....	24	4 80	39	4 36
Meats, other than Pork.....	37	7 40	40	3 31
Pork.....	1,355	271 00	495	38 56
Sheep.....			132	11 49
Tallow.....	74	11 75	138	9 36
Wool.....	468	92 80	10	0 94
All other Agricultural Products, Animal.....			977	135 57
Total Class No. 3	557,398	109,126 71	180,005	10,735 74

APPENDIX A.—*Continued.*

the Amount of Tolls collected during the Season of Navigation in 1889.

Chamblly Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
72,041	251 08	165,001	658 52	62,377	665 25	13,794	275 88	19,729	148 25
636	7 24			714	18 87				
45,454	756 02	207,162	2,975 07	82,630	986 81	104,468	2,089 36	878	14 40
121,776	1,656 06	61,419	1,393 37	18,703	272 83				
239,907	2,670 40	433,582	5,026 96	164,424	1,943 76	118,262	2,365 24	20,607	162 65
No.		No.		No.		No.		No.	
5,017	78 43	14,787	190 64	2,910	73 38			4,727	47 32
Tons.		Tons.		Tons.		Tons.		Tons.	
807	74 54	110	6 33	480	11 28			21	1 80
18	1 80								
264	26 40	163	5 98	257	6 25				
5,809	580 32	6,182	190 74	304	7 14				
		1	6 10	83	2 11	998	9 98		
140	14 00			57	1 34				
25	2 50	24	2 29	160	6 10				
				400	10 32				
				945	32 22				
1,746	172 57	253	5 30	321	11 22				
399	36 68	3	0 18	18	0 43				
1,078	52 99	390	28 39	270	6 40				
		2	0 20	52	1 55				
				1	0 03				
252	8 40	19	1 46	366	10 20	1,505	15 05		
1,413	82 24	266	22 33	134	3 21				
		9	0 89	52	1 50				
				10	0 28				
1,370	45 71	855	53 42	13	0 33				
31	1 04	1,386	91 22	21	0 52				
3	0 30	301	24 34	119	3 20				
		1	0 10	23	0 57				
		14	1 35	22	0 70				
				1	0 03				
3	0 10	70	5 76	311	7 88				
11	0 37	37	2 23	8	0 24	21,024	210 24		
		12	1 16	24	0 77				
39	1 30	501	31 90	6	0 16				
		31	2 61						
		19	1 76	1	0 03				
33	1 10	190	10 22	16	0 48				
				25	0 75				
		1	0 18	7	0 17				
		6	0 46	115	3 42				
129	4 30	279	19 77	2	0 05				
17	1 70	3	0 22	6	0 16				
				1	0 03				
12	0 40	935	83 65	580	14 25				
13,599	1,108 76	12,063	594 54	5,211	145 32	23,527	235 27	21	1 80

SUPPLEMENTARY

No. (A) 38—STATEMENT of Traffic in the undermentioned

ARTICLES.	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
<i>Class No. 4.</i>		\$ cts.		\$ cts.
Ashes, Pot and Pearl.....	112	22 40	114	20 20
Agricultural Implements.....			118	18 12
Crockery and Earthenware.....	7	0 50	259	49 66
Dye Woods and Dye Stuffs.....			166	11 87
Furniture.....	45	8 48	525	96 75
Glass, all kinds.....	2	0 30	434	81 14
Marble.....	4,455	668 25	39	3 73
Manilla.....	8	1 20	1	0 05
Molasses.....	430	68 90	3,060	207 20
Nails.....	142	13 72	3,237	552 69
Oil, in barrels.....	183	6 05	1,606	192 29
Paint.....	134	19 58	367	51 02
Pitch and Tar.....	40	6 00	1,396	97 24
Rags.....			183	21 20
Rosin.....			1,408	74 57
Soda Ash.....	3	0 45	1,544	297 58
Steel.....			219	34 01
Sugar.....	952	123 71	5,420	643 87
Stone, wrought.....	13	2 60	257	23 60
Tin.....	125	18 75	846	154 72
Turpentine.....			235	15 05
White Lead.....			102	19 90
Whiting.....	153	22 95	447	87 18
Whiskey and all other spirits.....	241	46 48	1,009	184 44
Merchandise, not enumerated.....	26,370	3,947 75	11,966	1,850 36
Total, Class No. 4.....	33,415	4,978 07	34,958	4,788 44
<i>Class No. 5.</i>				
Bark.....	301	37 88		
Barrels, empty.....			306	38 16
Boat Knees.....				
Floats.....			5,818	101 99
Firewood, in Vessels.....	15,108	644 83	10,824	280 98
“ in Rafts.....			6	0 25
Lumber, Sawn, in Vessels.....	84,866	14,932 20	54,072	1,852 66
do in Rafts.....	2	22	205	8 37
Hoops.....			9	0 90
Railways Ties, in Vessels.....	924	143 18	1,244	24 89
“ in Rafts.....				
Mats, Spars and Telegraph Poles, in Vessels.....	215	32 25	17,936	448 40
“ in Rafts.....	10	1 25	6,046	151 15
Square Timber, in Vessels.....	77,201	11,578 88	2,590	39 97
“ in Rafts.....	2,926	657 09	8,548	230 70
Woodenware and Wood partly manufactured.....	45	18 00	187	44 40
Shingles.....	52	36 27	106	29 68
Split Posts and Fence Rails, in Vessels.....	17	6 36	11	1 10
“ in Rafts.....				
Saw Logs.....	5,102	215 88	19,491	445 46
Staves and Headings, Barrel.....	4	0 46	22	3 30
“ Pipe.....	506	94 49		
“ West India.....	627	117 16	186	6 99
“ Salt Barrel.....			10	0 80
Traverses.....			12,508	32 55
Hop Poles.....				
Total, Class No. 5.....	187,906	28,516 40	140,125	3,742 70

APPENDIX A—Continued.

Canals, and the Amount of Tolls collected, &c.—Continued.

Chamby Canal.		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Trent Valley Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
		17	2 76	6	52				
10	1 00	1	0 19	148	14 26			1	0 25
58	5 80	2	0 19	36	3 42				
2	0 20	44	5 93	2	0 18				
				50	4 82				
				34	3 04				
				8	0 71				
2,799	307 57	2	0 38	87	7 74				
491	48 60	4	0 38	309	27 77				
8	0 80			208	19 10				
1,248	124 80			7	0 72				
		6	105	18	1 60				
1,373	137 30			8	0 80				
283	23 70			2	0 18				
110	11 00			36	3 13				
2,452	245 20	5	0 95	15	0 53				
264	26 40			331	30 86				
				3	0 36				
204	20 40			28	2 67				
				20	1 79				
		1	0 19	46	4 02				
3,136	263 92	297	41 76	165	14 93	1,241	12 41	79	2 37
12,438	1,216 69	379	53 78	896	86 71				
						1,241	12 41	80	2 62
		13	1 27	76	3 56			319	3 40
5	0 34	63	7 75	19	1 50				
		8,910	81 20	3,026	53 62			50	0 50
3,192	104 77	38,829	1,561 39	13,922	234 65			18,761	189 86
		6,762	92 02						
81,656	4,854 99	610,932	48,506 06	59,722	2,669 36	7,126	71 26	835	13 25
9	3 34	3,919	45 11	81	6 47				
		13	1 17						
4,721	381 89	1,410	136 59	7,492	873 67			231	8 50
		823	38 67						
				296	23 68			82	1 46
								17	1 38
		1,730	43 98	2,080	111 26			75	0 50
		22	4 40	4	0 80				
67	10 44	432	343 53	66	9 76			12	0 99
18	1 22	3	0 66	6	0 81			2	0 25
								9	0 05
		6,826	156 00	880	20 10			4,628	57 67
				4	0 30				
				1,633	13 26				
				93	13 50				
89,668	5,356 99	680,687	51,019 80	89,404	4,036 30	7,126	71 26	25,021	277 81

SUPPLEMENTARY

No. (A) 38.—STATEMENT of Traffic in the undermentioned

ARTICLES.	Welland Canal.		St. Lawrence Canals.	
	Tons.	Tolls.	Tons.	Tolls.
<i>Special Class.</i>		\$ cts.		\$ cts.
Coal	268,305	53,181 95	146,924	20,141 85
Kryolite or Chemical Ore.....	10	0 50	2,568	128 40
Iron Ore.....	2,425	121 25		
Stone (unwrought, not suitable for cutting.....	10,049	969 87	2,397	90 30
Ice.....				
Total, Special Class	280,789	54,273 57	151,889	20,360 55
Total Freight and Tolls	1,059,508	215,685 88	506,977	57,954 97
Timber and other Wood, Free.....	397	19 20	16,587	669 91
Wheat, Corn, Flour, Iron, Salt, Coal, &c., Free.....	25,368	3,805 20	396,308	13,880 34
Grand Totals, Passengers and Tonnage of Vessels not included.....	1,085,273	219,510 20	919,872	72,505 22

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 19th May, 1890.

APPENDIX A.—*Concluded.*

Canals, and the Amount of Tolls collected, &c.—*Concluded.*

Chambly Canal		Ottawa Canals.		Rideau Canal.		St. Peter's Canal.		Newcastle District Canals.	
Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.	Tons.	Tolls.
	\$ cts.		\$ cts.		\$ cts.		\$ cts.		\$ cts.
104,430	10,262 25	304	10 13	10,356	461 88	23,549	235 49	.....	.....
.....	.....	1,248	64 74	1,200	60 00	.....	.....	8	0 08
146	14 60	90	0 96	1,423	30 63	.....	.....	.....	.....
.....
104,576	10,276 85	1,642	75 83	12,979	552 51	23,549	235 49	8	0 08
.....
220,281	20,708 12	694,771	56,961 55	110,057	6,981 13	55,443	2,919 67	25,130	492 28
.....	.....	52,302	439 31	.....	.....	.....	.....	.....	.....
170	17 00	.....	.....	3,069	81 90	.....	.....	.....	.....
.....
220,451	20,725 12	747,073	57,400 86	113,126	7,063 03	55,443	2,919 67	25,130	492 28

B. H. TEAKLES,
Chief Clerk Canals Revenue.

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 18.—STATEMENT showing the Amount of Tolls accrued each month during the Season of Navigation ended 31st December, 1889.

Cannals and Offices.	January.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
WELLAND CANAL.												
Chippawa.....			6 04	1 75	34 05	14 63	6 69	4 58	6 22	8 66		82 59
Colborne.....			12,450 54	16,397 20	18,478 63	20,692 29	25,402 23	23,884 12	19,841 81	12,761 15	479 29	150,387 26
Dalhousie.....			4,442 16	7,100 55	10,314 06	6,692 59	12,432 34	10,413 78	7,787 85	4,277 47		63,480 00
Dunnville.....				83 28	52 65		25 72	0 25	109 95	120 76		448 79
Matland.....				7 29	14 23	3 95	1 00	24 81	5 84			57 12
Robinson.....			127 34	166 95	102 04	112 30	93 88	68 82	129 56	115 79	7 19	923 87
St. Catharines.....			35 68	34 73	28 70	54 44	40 17	33 18	56 95	21 60		305 45
Total Welland Canal.....			17,061 73	23,791 75	29,024 36	27,626 38	38,022 03	34,429 54	27,938 18	17,305 43	486 48	215,685 88
St. LAWRENCE CANALS.												
Beauharnois.....			63 32	46 96	72 87	164 17	133 38	121 67	186 24	92 61		881 12
Cardinal.....			65 05	57 68	102 46	70 51	225 62	338 25	241 63	40 23	11 55	1,132 98
Cornwall.....			8 21	2,359 31	2,848 90	3,468 78	2,103 13	2,226 55	1,473 27	1,165 57	15 74	15,669 46
Kingston.....			439 57	1,482 50	1,884 10	3,284 38	1,289 39	1,122 34	640 67	624 45		10,717 40
Lachine.....			36 09	282 60	342 43	363 92	333 41	363 67	407 00	244 05		2,373 17
Montreal.....			628 60	3,421 40	3,670 45	4,716 56	4,804 34	4,124 20	3,707 93	2,087 26		27,160 74
Total St. Lawrence Canals			1,240 84	7,650 45	8,921 21	12,068 32	8,839 27	8,296 68	6,656 74	4,254 17	27 29	57,954 97
CHAMBLY CANAL.												
Chambly.....			19 96	600 15	778 46	883 41	1,234 82	776 26	1,114 08	677 36		6,084 50
St. John's.....				2,906 84	2,961 95	2,426 72	2,140 62	1,654 38	1,347 50	732 49		14,170 50
St. Ours.....			10 50	43 37	44 50	66 25	64 04	63 01	84 31	77 14		433 12
Total Chamblay Canal.....			30 46	3,550 36	3,784 91	3,376 38	3,439 48	2,493 65	2,545 89	1,486 99		20,708 12

OTTAWA CANALS.	Ottawa	971 12	7,191 48	6,127 09	5,954 68	6,663 63	5,254 35	5,442 12	1,544 87	39,149 94
	Carillon	5 83	142 49	180 69	97 05	16 47	41 09	39 74	43 81	567 17
	Grenville	383 72	2,591 86	2,506 20	2,589 57	2,288 38	1,786 93	2,214 65	1,542 03	15,903 34
	St. Anne's	64 46	145 33	205 93	208 64	212 36	192 24	167 69	144 45	1,341 10
	Total Ottawa Canals	1,425 13	10,071 16	9,019 91	8,849 94	9,180 84	7,275 21	7,864 20	3,275 16	56,961 55
RIDEAU CANAL.	Kingston Mills	7 97	179 15	254 06	337 62	282 24	160 30	156 99	72 30	1,450 63
	Ottawa	104 46	657 66	839 12	1,181 57	937 83	653 86	524 42	231 50	5,130 42
	Smith's Falls .....	.....	65 54	73 41	102 64	75 07	30 95	35 00	17 47	400 08
	Total Rideau Canal	112 43	902 35	1,166 59	1,621 83	1,295 14	845 11	716 41	321 27	6,981 13
	St. Peter's Canal .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
TRENT VALLEY CANALS.	St. Peter's	1 96	9 98	356 00	333 10	412 09	438 35	380 35	306 84	2,919 67
	Bobcaygeon .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Peterborough .....	.....	14 78	34 58	25 75	56 27	53 54	43 78	12 79	241 49
	Hastings .....	.....	6 64	16 62	35 75	35 65	47 10	24 03	9 94	175 73
	Fenelon Falls .....	.....	.....	.....	3 00	5 78	8 10	14 50	5 90	37 28
Total Trent Valley Canals .....	.....	.....	.....	.....	5 16	10 09	12 60	0 50	9 43	37 78
	Total Trent Valley Canals .....	.....	21 42	51 20	69 66	107 79	121 34	82 81	38 06	492 28
	Grand Total	1 96	9 98	52,324 18	53,945 61	61,296 64	53,899 88	46,184 58	26,987 92	361,703 60

B. H. TEAKLES,
Chief Clerk Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 19th May, 1890.

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 19.—GENERAL STATEMENT showing the Number, Tonnage and Nationality of Vessels passed through all the Canals during the Season of Navigation ended the 31st December, 1889, and the amount of Tolls collected thereon.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		Form United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
WELLAND CANAL.													
Canadian Vessels, steam.....	820	70,308	51,740	68,050	5,154	.....	300	4,402	87,173	142,760	144,307	287,127	3,844 99
“ “ sail.....	1,141	56,028	42,129	66,620	12,118	976	502	14,439	86,007	138,063	140,756	278,819	5,543 28
Total Canadian.....	1,961	126,336	93,869	134,670	17,272	976	802	18,841	173,180	280,823	285,123	565,946	9,388 27
United States Vessels, steam.....	467	.....	71	9,818	315	159,388	135,394	345	37,473	169,551	173,253	342,804	5,149 06
“ “ sail.....	547	99	10	4,035	682	85,520	62,195	15	36,640	89,669	93,527	183,196	4,110 02
Total United States....	1,014	99	81	13,853	997	244,908	197,589	360	66,113	259,220	266,780	526,000	9,259 08
Grand Total, Welland Canal	2,975	126,435	93,950	148,523	18,269	245,884	198,391	19,201	241,293	540,043	551,903	1,091,946	18,647 35
ST. LAWRENCE CANALS.													
Canadian Vessels, steam.	3,098	339,784	290,733	13,690	.....	.....	.....	.....	6,116	353,474	296,849	650,323	3,965 55
“ “ sail.....	5,696	556,710	366,018	34,981	48	.....	.....	97	47,925	591,788	413,991	1,005,779	11,030 05
Total Canadian.....	8,794	896,494	656,751	48,671	48	.....	.....	97	54,041	945,262	710,840	1,656,102	14,995 60
United States Vessels, steam..	560	125	168	2,512	134	7,423	7,266	142	2,461	10,202	10,029	20,231	141 99
“ “ sail.....	821	2,161	12,260	2,598	3,209	689	1,606	54,299	4,347	59,747	21,422	81,169	487 10
Total United States.....	1,381	2,286	12,428	5,110	3,343	8,112	8,872	54,441	6,808	69,949	31,451	101,400	829 09
Grand Total, St. Lawrence Canals.....	10,175	898,780	669,179	53,781	3,391	8,112	8,872	54,538	60,849	1,015,211	742,291	1,757,502	15,824 69

SUPPLEMENTARY APPENDIX A—Continued.

No. (A) 19.—GENERAL STATEMENT showing the Number, Tonnage and Nationality of Vessels, &c.—Concluded.

Vessels.	Total Number.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Tolls.
		Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
ST. PETER'S CANAL.													
Canadian Vessels, steam.....	105	6,416	7,378							6,416	7,378	13,794	275 88
“ “ sail	2,056	54,217	50,251							54,217	50,251	104,468	2,089 36
Total Canadian.....	2,161	60,633	57,629							60,633	57,629	118,262	2,365 24
United States Vessels, steam.....													
“ “ sail													
Total United States.....													
Grand Total, St. Peter's Canal	2,161	60,633	57,629							60,633	57,629	118,262	2,365 24
TRENT VALLEY CANALS.													
Canadian Vessels, steam.....	436	19,354	375							19,354	375	19,729	148 25
“ “ sail	39	527	351							527	351	878	14 40
Total Canadian.....	475	19,881	726							19,881	726	20,607	162 65
United States Vessels, steam.....													
“ “ sail													
Total United States.....													
Grand Total, Trent Valley Canals	475	19,881	726							19,881	726	20,607	162 65

SUPPLEMENTARY APPENDIX A.—Continued.

No. (A) 191.—COMPARATIVE STATEMENT of Grand Total Freight passed through the undermentioned Canals during the Seasons of Navigation of 1888 and 1889, and the Amount of Tolls collected on the same, including Tolls on Vessels and Passengers.

Canals.	From Canadian to Canadian Ports.		From Canadian to United States Ports.		From United States to United States Ports.		From United States to Canadian Ports.		Tons.		Total Tons.	Amount of Toll.
	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.	Up.	Down.		
1888.												
Welland Canal.....	21,968	119,827	39,153	23,016	213,689	221,064	22,451	217,632	297,261	581,539	878,800	166,055 79
St. Lawrence Canals.....	214,420	411,840	10,079	1,419	718	2,365	58,845	81,913	284,062	497,537	781,599	53,586 87
Chambly Canal.....	10,276	5,999	84,684	11,961			21	128,812	94,981	146,772	241,753	22,282 62
Rideau Canal.....	81,036	27,001	4,211						85,247	27,001	112,248	6,566 86
Ottawa Canal.....	192	555,372		137,683					132	693,057	693,249	51,348 43
St. Peter's Canal.....	12,674	26,021		160			294		12,968	26,181	39,149	2,204 57
Trent Valley Canals.....	14,599	200							14,599	200	14,799	257 12
1889.												
Welland Canal.....	27,592	57,752	16,388	20,381	266,231	297,353	16,502	383,074	326,713	758,560	1,085,273	215,685 88
St. Lawrence Canals.....	222,956	521,704	10,389	700	993	2,838	64,613	95,679	298,951	620,921	919,872	57,954 97
Chambly Canal.....	8,975	3,582	83,164			2		124,558	92,139	128,142	220,281	20,708 12
Rideau Canal.....	76,665	24,117	12,354						89,009	24,117	113,126	6,981 13
Ottawa Canal.....	443	516,784		177,416			128		571	694,200	694,771	56,961 55
St. Peter's Canal.....	23,180	32,263							23,180	32,263	55,443	2,919 67
Trent Valley Canals.....	24,966	164							24,966	164	25,130	492 28

B. H. TEAKLES,
Chief Clerk Canals Revenue.

APPENDIX A—*Continued.*

No. 23.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1889.

WELLAND AND ST. LAWRENCE CANALS.

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
8	57	456	83	664	45	360	10	80
10	17	170	32	320	11	110	4	40
15	21	315	12	180	8	120	3	45
20	21	420	23	460	7	140	8	160
25	17	425	18	450	10	250	2	50
30	27	810	11	330	12	360	6	180
35	26	910	13	455	3	105	1	35
40	26	1,040	55	2,200	8	320	10	400
45	6	270	15	675	6	270	1	45
50	16	800	47	2,350	3	150	1	50
55	5	275	12	660	1	55		
60	10	600	17	1,020	1	60	7	420
65	2	130	13	845	1	65		
70	8	560	16	1,120	1	70	2	140
75	8	600	19	1,425	1	75	1	75
80	4	320	32	2,560			5	400
85	4	340	22	1,870	1	85	9	765
90	7	630	35	3,150	1	90	21	1,890
95	6	570	26	2,470	2	190	90	8,550
100	6	600	52	5,200	2	200	98	9,800
105	7	735	48	5,040	1	105	69	7,245
110	6	660	39	4,290	6	660	26	2,860
115	3	345	27	3,105	4	460	30	3,450
120	2	240	18	2,160	3	320	13	1,560
125	1	125	15	1,875			4	500
130	1	130	25	3,250			6	780
135	1	135	12	1,625	1	135	4	540
140	1	140	14	1,960			2	280
145	3	435	14	2,030				
150	1	150	29	4,350				
155	4	620	45	6,975				
160	2	320	30	4,800	3	480	3	480
165	3	495	20	3,300				
170	1	170	8	1,360				
175	1	175	8	1,400	1	175	1	175
180	1	180	3	540				
185	3	555	11	2,035				
190	1	190	8	1,520	1	190	1	190
195			6	1,170			2	390
200	7	1,400	16	3,200	2	400	3	600
205	2	410	1	205			2	410
210	2	420	7	1,470			3	630
215	2	430	4	860				
220			4	880	1	220	2	440
225			4	900			1	225
230			8	1,840	1	230	3	690
235	1	235	3	705			2	470
240	2	480	2	480	2	480	1	240
245	1	245	5	1,225			1	245
250	2	500	2	500	1	250	2	500
255			2	510	1	255	4	1,020
260			2	520	1	260	5	1,300
265			2	530	1	265	8	2,120
270	3	810	6	1,620			9	2,430
275	2	550	5	1,375			6	1,650
280	1	280	3	840	2	560	5	1,400

APPENDIX A—*Continued.*

No. 23.—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals, &c.—*Continued.*

WELLAND AND ST. LAWRENCE CANALS—*Continued.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
285			5	1,425	1	285	9	2,565
290	1	290	2	580			8	2,320
295	5	1,475	3	885			5	1,475
300	1	300	7	2,100	1	300	10	3,000
305	3	915	11	3,355			8	2,440
310			6	1,860			6	1,860
315			4	1,260			6	1,890
320	1	320	11	3,520	1	320	7	2,240
325	1	325	7	2,275	1	325	6	2,010
330	1	330	6	1,980			6	1,980
335	1	335	8	2,680			4	1,340
340			5	1,700			2	680
345	2	690	8	2,760				
350			2	700	1	350		
355			1	355			1	355
360			7	2,520	1	360	1	360
365	1	365	7	2,555				
370	1	370	3	1,110	1	370		
375	1	375	4	1,500				
380	1	380	2	760				
385	2	770			1	385	1	385
390	1	390	4	1,560			1	390
395	4	1,580					2	790
400	2	800	3	1,200			3	1,200
405	1	405	1	405				
410	2	820	1	410			1	410
415	3	1,245	1	415				
420							1	420
425			5	2,125			2	850
430								
435			2	870	1	435		
440	4	1,760	2	880				
445			1	445				
450	1	450	1	450				
455	1	455	2	910				
460			1	460	1	460		
465			1	465			1	465
470					1	470	2	940
475			2	950	2	950	4	1,900
480							1	480
485	1	485					2	970
490	1	490					1	490
495							1	495
500	1	500	1	500			1	500
505							2	1,010
510	3	1,530						
515							1	515
520			3	1,560	1	520	4	2,080
525			1	525	1	530		
530	1	530					1	530
535	1	535						
540	1	540					2	1,080
545	1	545	1	545				
550								
555							1	555
560								

APPENDIX A—*Concluded.*

No. 23—STATEMENT of the Number and Tonnage of all kinds of Vessels
passed through the Canals, &c.—*Concluded.*

WELLAND AND ST. LAWRENCE CANALS—*Concluded.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
565								
570	1	570	1	570				
575								
580	2	1,160						
585	2	1,170	1	585				
590	2	1,180					1	590
595	2	1,190			1	595		
600					2	1,200		
605							1	605
610								
615	1	615	1	615	1	615		
620					1	620	1	620
625								
628			1	628				
640			1	640			1	640
655					4	2,620		
660	1	660			1	660	1	660
675								
690	1	690			2	1,380	1	690
715	3	2,145	1	715				
769	1	769			1	769		
782					1	782	1	782
802								
812	1	812					1	812
836	1	836			1	836		
851							1	851
910					2	1,820	2	1,820
929	1	929			1	929		
985					4	3,940		
990					1	990		
1,001			1	1,001	2	2,002	1	1,001
1,024					3	3,072		
1,035					3	3,105		
1,037					1	1,037		
1,105	1	1,105			1	1,105		
1,160					1	1,160		
1,172								
1,195					1	1,195	1	1,195
1,203					1	1,203		
1,425					1	1,425		
1,441					1	1,441		
Total....	432	55,932	1,158	154,158	209	49,081	625	107,181

RIDEAU, OTTAWA AND CHAMBLY CANALS.

8	53	424	71	568	12	96	8	64
10	14	140	28	280	2	20	2	20
15	5	75	3	45	2	30	1	15
20	2	40	4	80			3	60
25	5	125	5	125	1	25		
30	3	90	4	120	1	30		

APPENDIX A—*Concluded.*

No. 23—STATEMENT of the Number and Tonnage of all kinds of Vessels passed through the Canals, &c.—*Concluded.*

RIDEAU, OTTAWA AND CHAMBLY CANALS—*Concluded.*

CANADIAN.					UNITED STATES.			
Steam Vessels.			Sailing Vessels.		Steam Vessels.		Sailing Vessels.	
Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.	Number.	Total Tonnage.
35	5	175	2	70	1	35	1	35
40	2	80	2	80				
45	1	45	1	45				
50	4	200	4	200	1	50	1	50
55	2	110	3	165				
60	2	120	4	240			1	60
65	2	130	3	195			1	65
70			2	140			1	70
75	1	75	4	300	1	75	2	150
80			6	480			2	160
85	1	85	4	340			10	850
90			9	810			32	2,880
95	3	285	16	1,520			120	11,400
100	1	100	10	1,000			112	11,200
105	1	105	9	945			43	4,515
110			4	440			27	2,970
115			7	805			15	1,725
120			6	720			9	1,080
125	1	125	8	1,000				
130			5	650				
135	1	135	3	405			1	135
140			3	420				
145			6	870				
150			12	1,800				
155	1	155	22	3,410				
160			6	960				
165			5	825				
170			1	170				
175								
180								
185	2	370	1	185				
190								
195								
200								
205								
210	1	210						
220								
225								
230	1	230	1	230				
235			1	235				
240								
245								
250								
255								
260								
265								
270								
275								
332								
345								
397	1	397						
Total	115	4,026	285	20,873	21	361	392	37,504

B. H. TEAKLES, *Chief Clerk Canals Revenue,*
DEPARTMENT OF RAILWAYS AND CANALS, OTTAWA, 19th May, 1890.

SUPPLEMENTARY APPENDIX A.—Continued.

No. 24.—STATEMENT showing the Classified Tonnage of all kinds of Vessels passed through the Canals during the Season of Navigation in 1889.

WELLAND AND ST. LAWRENCE CANALS.

CANADIAN.						UNITED STATES.					
Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessel.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.
1	250 to 1,105 tons...	79	36,271	1	250 to 1,001 tons...	171	61,204	1	250 to 1,441 tons...	59	42,151
2	200 to 249 "...	17	3,620	2	200 to 249 "...	54	11,765	2	200 to 249 "...	6	1,330
3	150 to 199 "...	17	2,855	3	150 to 199 "...	168	27,460	3	150 to 199 "...	5	845
4	100 to 149 "...	31	3,545	4	100 to 149 "...	264	30,535	4	100 to 149 "...	17	1,880
5	50 to 99 "...	70	4,825	5	50 to 99 "...	239	17,470	5	50 to 99 "...	12	840
6	Under 50 "...	218	4,816	6	Under 50 "...	262	5,734	6	Under 50 "...	45	2,035
Total.....			55,932	Total.....			154,158	Total.....			107,181

RIDEAU, OTTAWA AND CHAMBLY.

Class.	Steam Vessels.	No.	Tonnage.	Class.	Sailing Vessel.	No.	Tonnage.	Class.	Steam Vessels.	No.	Tonnage.
1	250 to 397 tons...	1	397	1	250 to 379 tons...	2	465	1	250 to 397 tons...	1	250 to 397 tons...
2	200 to 249 "...	2	440	2	200 to 249 "...	47	7,350	2	200 to 249 "...	2	200 to 249 "...
3	150 to 199 "...	3	525	3	150 to 199 "...	61	7,255	3	150 to 199 "...	3	150 to 199 "...
4	100 to 149 "...	4	465	4	100 to 149 "...	55	4,390	4	100 to 149 "...	4	100 to 149 "...
5	50 to 99 "...	15	1,005	5	50 to 99 "...	120	1,413	5	50 to 99 "...	5	50 to 99 "...
6	Under 50 "...	90	1,194	6	Under 50 "...	285	20,873	6	Under 50 "...	6	Under 50 "...
Total.....			4,026	Total.....			21	Total.....			37,504

B. H. TEAKLES,
Chief Clerk Canals Revenue.

DEPARTMENT OF RAILWAYS AND CANALS,
OTTAWA, 19th May, 1890.

No. 25.—RATES of Tolls on the Canals

WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA AND CHAMBLY

The Rates of Tolls are divided into Five Classes, as under, and are per ton, unless otherwise specified.	Welland Canal, west- ward.	Welland Canal, east- ward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals and St. Anne's Lock, each way.	Ottawa to St. John's, each way.
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Class No. 1.								
Vessels, Steam. per ton	0 01½	0 01½	0 02¼	0 00¾	0 00¾	0 01½	0 00¾	0 01½
do Sail and other.	0 02¼	0 02¼	0 03¾	0 01½	0 00¾	0 02¼	0 01	0 02¾
Class No. 2.								
Passengers, 21 years of age and upwards.	0 10	0 10	0 20	0 10	0 05	0 08	0 02½	0 09
do under 21 years each.	0 05	0 05	0 10	0 05	0 02	0 04	0 01½	0 04
Class No. 3.								
Bricks, Cement and Water Lime.	} 15	0 20	0 20	0 15	0 10	0 07	0 06	0 19
Clay, Lime and Sand.								
Brimstone.								
Corn.								
Flour.								
Iron, Railway.								
do Pig.								
do all other.								
Plaster, Gypsum.								
Salt.								
Salt Meats or Fish, in barrels or otherwise.								
Agricultural Products, Vegetable, not enumerated. do Animal, not enumerated.								
Stone, for cutting.								
Wheat.								
Class No. 4.								
All other Articles, not enumerated.	0 15	0 20	0 20	0 20	0 10	0 26	0 14	0 29
Class No. 5.								
Bark.	0 20	0 20	0 20	0 15	0 10	0 07	0 06	0 19
Barrels, Empty, each.	0 02	0 02	0 02	0 02	0 02	0 02	0 01	0 03
Boat Knees, each.	0 05	0 05	0 05	0 02	0 02	0 02	0 01	0 03
Floats, per 1,000 lineal feet.	1 40	1 40	1 40	1 40	1 20	1 05	0 50	2 05
Firewood, per cord, in Vessels.	0 20	0 20	0 20	0 20	0 10	0 15	0 08	0 23
do do Rafts.	0 25	0 25	0 25	0 25	0 15	0 19	0 09	0 30
Hoops.	0 25	0 25	0 25	0 20	0 15	0 15	0 10	0 30
Masts and Spars, Telegraph Poles, per ton, of 40 cubic feet, in Vessels.	0 15	0 15	0 15	0 05	0 05	0 08	0 07	0 13
Masts and Spars, Telegraph Poles, per ton, of 40 cubic feet, in Rafts.	0 20	0 20	0 20	0 10	0 10	0 15	0 10	0 22
Railway Ties, in Vessels, each.	0 01	0 01	0 01	0 00½	0 00½	0 00½	0 00½	0 01
do Rafts, each.	0 02	0 02	0 02	0 01	0 01	0 02	0 01	0 02
Sawed Stuff, Boards, Plank, Scantling and Sawed Timber, per M. feet, board measure, in Vessels.	0 30	0 30	0 30	0 15	0 10	0 11½	0 06¾	0 20
Sawed Stuff, Boards, Plank, Scantling and Sawed Timber, per M. feet, board measure, in Rafts.	0 60	0 60	0 60	0 30	0 20	0 19	0 09	0 36
Square Timber, per M. cubic feet, in Vessels.	3 00	3 00	3 00	1 00	1 00	0 56	0 44	1 69
do do Rafts.	4 50	4 50	4 50	2 00	2 00	1 12	0 63	3 13

of the Dominion of Canada, 1889.

CANALS (TRENT VALLEY CANAL, O.C. 25TH JULY, 1888.)

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Whitlaw's to Hastings.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Bobcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Whitlaw's.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₁₆ 0 00 ¹ / ₄	0 00 ³ / ₄ 0 01	0 00 ³ / ₁₆ 0 00 ¹ / ₄
0 01 0 00 ¹ / ₂	0 01 0 00 ¹ / ₂	0 01 0 00 ¹ / ₂	0 01 0 00 ¹ / ₂	0 04 0 02	0 01 0 00 ¹ / ₂
0 01	0 01	0 01	0 01	0 04	0 01
0 03	0 03	0 03	0 03	0 12	0 03
0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02	0 04 0 01 0 01 0 52 0 10 0 14 0 08	0 01 0 00 ¹ / ₄ 0 00 ¹ / ₄ 0 13 0 03 0 04 0 02
0 02	0 02	0 02	0 02	0 08	0 02
0 01 0 00 ¹ / ₂ 0 00 ¹ / ₄	0 01 0 00 ¹ / ₂ 0 00 ¹ / ₄	0 01 0 00 ¹ / ₂ 0 00 ¹ / ₄	0 01 0 00 ¹ / ₂ 0 00 ¹ / ₄	0 04 0 00 ¹ / ₂ 0 01	0 01 0 00 ¹ / ₂ 0 00 ¹ / ₄
0 03	0 03	0 03	0 03	0 10	0 03
0 04 0 07 0 14	0 04 0 07 0 14	0 04 0 07 0 14	0 04 0 07 0 14	0 14 0 28 0 56	0 04 0 07 0 14

No. 25.—RATES of Tolls on the Canals of the
WELLAND, ST. LAWRENCE, RIDEAU, OTTAWA AND CHAMBLY CANALS

The Rates of Tolls are divided into Five Classes, as under, and are per ton, unless otherwise specified.		Welland Canal, westward.	Welland Canal, eastward.	Lake Erie to Montreal.	St. Lawrence Canals, each way.	Chambly Canal and St. Ours Lock, each way.	Rideau Canal, each way.	Ottawa Canals and St. Ann's Lock, each way.	Ottawa to St. John's, each way.
		\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
<i>Class No. 5—Concluded.</i>									
Waggon Stuff, Woodenware and Wood, partly manufactured, per ton of 40 cubic feet.		0 40	0 40	0 40	0 40	0 25	0 30	0 20	0 55
Shingles, per M.		0 06	0 06	0 06	0 06	0 04	0 04 ¹ / ₂	0 02 ¹ / ₂	0 08
Split Posts and Fence Rails, per M., in Vessels.		0 40	0 40	0 40	0 40	0 20	0 23	0 12	0 42
Split Posts and Fence Rails, per M., in Rafts.		0 80	0 80	0 80	0 80	0 40	0 38	0 17	0 77
Sawlogs, each standard log.		0 08	0 08	0 08	0 08	0 05	0 06	0 06	0 13
Staves and Headings, Barrel, per M.		0 40	0 40	0 40	0 20	0 15	0 15	0 10	0 30
do Pipe do.		1 50	1 50	1 50	1 00	1 00	0 75	0 50	1 75
do West India, per M.		0 75	0 75	0 75	0 60	0 25	0 45	0 25	0 65
do Salt Barrel, Sawn or Cut, per M.		0 08	0 08	0 08	0 04	0 03	0 03	0 02	0 06
Traverses, per 100 pieces.		0 50	0 50	0 50	0 50	0 40	0 38	0 15	0 67 ¹ / ₂
Hop Poles, per 1,000 pieces.		2 00	2 00	2 00	2 00	1 50	1 50	0 65	2 65
<i>Special Class.</i>									
Gypsum, crude (per O.C., 28th Oct., 1882).		0 15	0 05	.....	0 05	westward	.....	.....	.....
Coal.		0 20	0 20	0 20	0 15	0 10	0 08	0 05	0 17 ³ / ₄
Stone, unwrought, corded, and not suitable for cutting, per cord.		0 75	0 75	0 75	0 60	0 37 ¹ / ₂	0 28	0 24	0 77 ¹ / ₂
Kryolite, Iron Ore or Chemical Ore.		0 05	0 05	0 05	0 05	0 05	0 05	0 05	0 05
Ice.		0 05	0 05	0 05	.....	.....	.....	.....	.....

Dominion of Canada, 1889—*Concluded.*

TRENT VALLEY CANAL, O. C., 25TH JULY, 1888.)—*Concluded.*

1ST SECTION.	2ND SECTION.	3RD SECTION.	4TH SECTION.	THROUGH.	Whitlaw's to Hastings.
Fenelon Falls to Bobcaygeon.	Bobcaygeon to Buckhorn.	Buckhorn to Burleigh.	Burleigh to Lakefield.	Fenelon Falls to Lakefield.	
Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Bobcaygeon.	Tolls Chargeable at Buckhorn.	Tolls Chargeable at Burleigh.	Tolls Chargeable at Fenelon Falls.	Tolls Chargeable at Whitlaw's.
\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
0 04	0 04	0 04	0 04	0 16	0 04
0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 03	0 00 $\frac{3}{4}$
0 03	0 03	0 03	0 03	0 12	0 03
0 05	0 05	0 05	0 05	0 20	0 05
0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 03	0 00 $\frac{3}{4}$
0 02	0 02	0 02	0 02	0 08	0 02
0 10	0 10	0 10	0 10	0 40	0 10
0 05 $\frac{1}{2}$	0 05 $\frac{1}{2}$	0 05 $\frac{1}{2}$	0 05 $\frac{1}{2}$	0 22	0 05 $\frac{1}{2}$
0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 00 $\frac{1}{2}$	0 02	0 00 $\frac{1}{2}$
0 05	0 05	0 05	0 05	0 20	0 05
0 20	0 20	0 20	0 20	0 80	0 20
Free.	Free.	Free.	Free.	Free.	Free.
0 01	0 01	0 01	0 01	0 04	0 01
0 03 $\frac{1}{2}$	0 03 $\frac{1}{2}$	0 03 $\frac{1}{2}$	0 03 $\frac{1}{2}$	0 14	0 03 $\frac{1}{2}$
0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 00 $\frac{3}{4}$	0 03	0 00 $\frac{3}{4}$
Free.	Free.	Free.	Free.	Free.	Free.

No. 25—*Continued.*NOTICE—*Continued.*

NOTE—Coal to pass up all Canals, except the Welland Canal, free of Toll, as per Order in Council, 7th June, 1869.

Logs, Lumber or other produce shall pass free of Toll down the Chippawa Creek, between the aqueduct and Port Robinson, as per O. C., 18th May, 1863.

Iron Ore, Kryolite or Chemical Ore, through one section, or all the Canals, per ton, 5 cents.

All goods having paid full Toll through the whole line of the St. Lawrence Canals, or through the Lachine Canal, St. Ann's Lock, or Ottawa and Rideau Canals, shall be allowed to pass free through the Welland Canal; and if Tolls have been paid at the Chambly Canal, such Tolls shall be refunded at Montreal or Kingston Mills; and having paid full Tolls through the Welland Canal, they shall be allowed to pass free through the St. Lawrence Canals, or through the Ottawa and Rideau Canals, St. Ann's Lock, the Lachine Canal and the Chambly Canal; Provided always, that the articles to be entitled to above exemptions shall go downwards through the whole length of the Canal to Montreal, or pass upward from Montreal through the whole length of the St. Lawrence Canals, or the Ottawa and Rideau Canals to Lake Ontario.

All articles, goods or merchandise not enumerated above, to be charged to class No. 4.

No Let Passes to be issued to Steam Tugs or other small vessels for less than 25 cents, as a minimum charge; but such vessels, not carrying freight or passengers, can obtain on payment of \$30 a season "Let Pass," which will pass them up and down the Canals as often as desired.

Goods shipped to any port west of the St. Lawrence Canals, Tolls upon which have already been paid for passage through such Canals, may be re-shipped from such ports and be passed through the Welland Canal free of Tolls, in the same way as if they had been shipped through direct in the first instance; and goods going eastward, having paid Welland Canal Tolls, may be transhipped at any port on Lake Ontario, and thereafter pass free through the St. Lawrence Canals, as if they had been shipped through direct in the first instance.

NOTICES.

CONTRACTORS' VESSELS AND CARGOES FREE.

O. C., 22nd April, 1884.—The Committee, on the recommendation of the Minister of Inland Revenue, advise that the Order in Council, dated 18th September, 1873, authorizing that all vessels owned or chartered by persons having contracts for the enlargement or repair of any of the Canals and employed by them in removing earth or carrying materials necessary for the prosecution of such works, be entitled to pass through such Canals free of Tolls, be amended by adding thereto after the last word "Tolls" the words "upon such vessel and cargo," and that the said amendment be deemed to apply from the date of the aforesaid Order in Council.

SPECIAL RATES FOR CEREALS GOING EAST.

O. C., 18th March, 1889.—Whereas it is considered expedient that the special rate of toll for the passage through the Welland Canal and the St. Lawrence Canals of certain easterly-bound food products, in force during the last season of navigation, should be continued during the forthcoming season, His Excellency the Governor General in Council, in pursuance of the provisions of the 13th section of Chapter 37 of the Revised Statutes of Canada, intituled: "An Act respecting the Department of Railways and Canals," has been pleased to order, and it is hereby ordered that the special rates of toll of two (2) cents per ton adopted last year for the passage through the Welland and St. Lawrence Canals of certain Cereals, Wheat, Indian Corn, Peas, Barley and Rye, when shipped for Montreal, or for any other port East of Montreal, be continued during the forthcoming season of navigation and no longer, such toll covering the Welland and St. Lawrence Canals.

His Excellency has been further pleased to order the continuance, for the same period only, of the arrangement under which the said food products, if they have paid the ordinary full toll for passage through the Welland Canal, shall be entitled to exemption from payment of any further toll for passage through any portion of the St. Lawrence Canal system, even if not traversing the whole distance to Montreal.

RAFTS, CARILLON CANAL.

O. C., 6th July, 1888.—On a memorandum dated 30th June, 1888, from the Minister of Railways and Canals representing that under an Order in Council, Rafts have been allowed free passage through the Carillon Canal, in view of the Dam constructed across the Ottawa River at Carillon, whereby the passage of the rapids at that point through the river was rendered difficult and at times impracticable.

The Minister states, that it appears to be necessary owing to the continued difficulty attending passage through the slide built in the Dam, that the Canal should be used by Rafts; and he recommends that dating from the opening of the present season and henceforward and until otherwise ordered, free passage be given to Rafts through the Carillon Canal, subject to such regulations as the Department of Railways and Canals may find it necessary in the interest of the traffic of the Canal to adopt.

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AN ACT RESPECTING THE BURLINGTON BAY CANAL.

[Assented to 2nd June, 1886.]

WHEREAS it is expedient in the interests of navigation, and for the convenience of the public, that Tolls for the use of the public work hereinafter mentioned should no longer be collected: Therefore Her Majesty, by and with the advice and consent of the Senate and House of Commons of Canada, enacts as follows:—

No. 25—Continued.

NOTICE—Continued.

1. Notwithstanding anything contained in the Act thirty-first Victoria, chapter twelve, intituled : “ *An Act respecting the Public Works of Canada,* ” no tolls shall hereafter be payable or collected in respect of the use of the public work near the City of Hamilton, in the Province of Ontario, commonly called the Burlington Bay Canal.

“STEEL” CLASSED WITH “IRON” AT 15c. ON ST. LAWRENCE CANALS ONLY.

O. C., 1st February, 1888.—WHEREAS the Minister of Railways and Canals reports that under the provisions of the existing tariff of tolls on the Dominion Canals established by an Order in Council of the 23rd June, 1883, an undesirable discrimination is in force between iron and steel for passage through the St. Lawrence Canals, iron being specified in class 3 and charged 15 cts. per ton, while steel, not being classified specially, comes under “class 4,” namely, “all other articles not enumerated,” and is charged 20 cts. per ton.

His Excellency in Council, on the recommendation of the Minister of Railways and Canals, and under the provisions of the 13th section of chapter 37 of the Revised Statutes of Canada, intituled : “ *An Act respecting the Department of Railways and Canals,* ” has been pleased to order and it is hereby ordered, that the said Order in Council of the 23rd June, 1883, establishing the tariff of the tolls on the Canals of the Dominion, be and the same is hereby modified so as to place “steel” in the same category as “iron,” making charge thereon 15 cts. per ton.

ST. PETER’S CANAL.

On each and every vessel passing through the said Canal, two cents per ton on the vessel, and one cent per ton on the freight, each way.

The following Way Rates to be levied on Vessels and Property passing the several Sub-Divisions of the Canals.

WELLAND CANAL.		Rate.
1. From Port Maitland, Dunnville and Port Colborne to Port Robinson or Allanburg, not passing the Lock, each way.....		10c
2. From Chippewa Cut, or any part thereof, to Dunnville, Port Maitland or Port Colborne.....		10c
3. From Dunnville to Port Colborne.....		10c
4. From Thorold to St. Catharines or Port Dalhousie.....		20c
5. From Maitland, Dunnville, Colborne or Port Robinson to Marshville and intermediate places		20c
6. From Marshville or intermediate places to Port Maitland, Dunnville, Port Colborne and Port Robinson.....		20c
7. From Port Robinson to Allanburg or Thorold.....		10c
8. do St. Catharines or Port Dalhousie.....		10c
9. From St. Catharines to Port Dalhousie.....		10c
10. From Dunnville to Maitland.....		10c
11. From Port Robinson through the Lock and Chippewa Cut.....		10c
12. From Port Colborne to Port Maitland.....		10c
13. From Chippewa Cut through Lock to Port Robinson.....		10c
14. From Colborne, Dunnville, Maitland and Marshville to Thorold.....		10c
15. do do do St. Catharines.....		10c
16. Through the Chippewa cut only.....		10c
17. Through the Port Robinson Lock only.....		10c
ST. LAWRENCE CANALS.		
The Navigation to be divided into four sections, viz. : Cardinal, Cornwall, Beauharnois and Lachine. Tolls to be levied on all vessels and property in proportion to the number of sections passed through.		
CHAMBLY CANAL.		
Vessels and property passing from Sorel to Chambly, to pay.....		10c
do do Chambly to St. John's, to pay.....		10c

OTTAWA CANALS.

The Navigation to be divided into three sections, viz. : Grenville, Carrillon and St. Ann's. Tolls to be levied on all vessels and property in proportion to the number of sections passed through.

RIDEAU CANAL.

The Navigation of this Canal is divided into three sections : “Ottawa,” “Smith's Falls” and “Kingston Mills.” Vessels and freight passing one section, to be charged one-third ; two sections, two-thirds.

No. 25—*Continued.*NOTICE—*Continued.*

GENERAL.

Any fraction of a ton freight to be charged one ton, and portions of sections to be charged as a whole section on all the above Canals.

The passing of Saw-Logs or other Lumber through any of the Canals, or sections thereof, is to be at all times governed by the Regulations for their management.

HARBOUR DUES.

Vessels receiving or discharging Freight at the premises of the Welland Railway, at Ports Colborne or Dalhousie, are to be free from Harbour Dues; but all other Vessels discharging or receiving cargo at Port Dalhousie, Port Colborne or Port Maitland, shall pay on every ton of Freight so received or discharged—Two cents.

STANDARD FOR ESTIMATING WEIGHTS.	Tons.
2,000 lbs. avoirdupois.....	1
Per M. is per thousand feet.....	1
Per Mille is per thousand pieces.....	1
Green Fruit, 9 barrels are.....	1
Ashes 3 do.....	1
Bark, 4 cords.....	1
Beef, 7 barrels.....	1
Biscuit and Crackers, 9 barrels.....	1
Bricks, common, 1,000.....	2
Butter, 22 kegs or 7 barrels.....	1
Cattle, 3.....	1
Cement and Water Lime, 7 barrels.....	1
Fire Bricks, 1,000.....	3
Fish, 7 barrels.....	1
Flour, 9 barrels.....	1
Gypsum and Manganese, 6 barrels.....	1
Horses, 2.....	1
Lard and Tallow, 7 barrels or 22 kegs.....	1
Liquors and Spirits, 215 gallons.....	1
Liquors, all other, 215 gallons.....	1
Nuts, 9 barrels.....	1
Oysters, 6 barrels.....	1
Pork, 7 barrels.....	1
Salt, 7 barrels.....	1
Seeds, 9 barrels.....	1
Sheep, 20.....	1
Stone, 12 cubic feet.....	1
Stone, 1 cord.....	7½
Whiskey, 4 barrels or 215 gallons.....	1
Empty barrels, 10.....	1
Barrel Hoops, 10 Mille.....	1
Board and other Sawn Lumber, 600 feet board measure.....	1
Boat Knees, 4.....	1
Firewood, 1 cord.....	3
Hop Poles, 60, or 40 cubic feet.....	1
Shingles, 12 M, or bundles.....	1
Split Posts and Fence Rails, 1 Mille.....	1
Staves and Headings, Pipe, 1 Mille.....	8
do West India, 1 Mille.....	4
do Barrel, 1 Mille.....	2½
do Salt Barrel, 1 Mille.....	4
Saw Logs, Standard, 1.....	1
Square Timber, 50 cubic feet.....	1
Telegraph Poles, 10, or 40 cubic feet.....	1
Masts and Spars, 40 cubic feet.....	1
Railroad Ties, 16, or 50 cubic feet.....	1
All other Woodenware, or partly manufactured Wood, 40 cubic feet, as per Tariff.....	1
Floats, 50 lineal feet.....	1
Traverses, 40 cubic feet or 5 pieces.....	1

NOTE.—By the Weights and Measures Act of 1873, the following articles are to be estimated by the cental of 100 lbs., viz.:—Barley, Beans, Charcoal, Corn, Oats, Peas, Potatoes, Rye, Salt, Seeds and Wheat, the weight equivalent to a bushel being as follows:—Wheat, sixty pounds; Indian corn, fifty-six pounds; Rye, fifty-six pounds; Peas, sixty pounds; Barley, forty-eight pounds; Oats, thirty-four pounds; Buckwheat, forty-eight pounds; Beans, sixty pounds; Potatoes, sixty pounds.

No. 25—*Continued.*NOTICE—*Continued.*

RATES OF TOLL ON PROPERTY STORED AT THE SHEDS AT LACHINE CANAL BASIN.

A PROCLAMATION.

WHEREAS it is expedient to provide for the levying of Tolls on the several Public Works constructed at the expense of the Province hereinafter mentioned; Know Ye, therefore, that from and after the date of these presents, and until such further time as Her Majesty's pleasure shall be made known in this behalf, there shall be paid for the use of Her Majesty, Her Heirs and Successors, to such person or persons as shall be duly authorized to receive the same, for passage and in the name of Tolls, the several sums agreeably to the scales which accompany these presents. Of all of which Her Majesty's loving subjects, and all others whom these presents may concern, are hereby required to take notice and to govern themselves accordingly.

Given under my hand and seal, at Montreal, the twenty-first day of August, in the year of our Lord one thousand eight hundred and forty-six, and the tenth year of Her Majesty's reign.

By command,
(Signed) D. DALY,
Secretary.

(Signed) CATHCART.

TABLE OF THE TOLLS TO BE LEVIED UPON PROPERTY STORED AT THE SHEDS AT THE LACHINE CANAL BASIN.

	s.	d.
Wheat and other grain, per week, per bushel		$\frac{1}{2}$
Flour and meal, per week, per barrel	2	
Pork, beef, butter and lard, per week, per barrel	3	
Muscovado sugar, per week, per hhd., 6d. per barrel	3	
Liquors, per week { per pipe, 9d. per puncheon	7	$\frac{1}{2}$
{ per hhd., 6d. per quarter cask	4	
Iron, bars, per week, per ton	1	0
Iron, pig, per week, per ton		6
Salt, per week, per 100 minots	1	8
Bales, crates, cases, &c., per week, per ton weight or measurement	1	0
Coals, per week, per chaldron		6

1. No charge made for property stored in the Sheds at the Lachine Canal Basin, for the first forty-eight hours, after which period the foregoing rates of storage for the use of the sheds, are to be raised, levied and collected.
2. Articles unenumerated are to be charged according to the above rates.
3. All property stored in the sheds remaining after the first forty-eight hours, will be liable to one week's storage, although it only should have been stored for a portion of the same, and so on for each succeeding week.
4. The labour of receiving property into the sheds and delivering the same, to be at the expense of, and to be furnished by the owners of the property or their agents.
5. All property stored in the sheds to be at the risk of the proprietor, from damage by fire or otherwise.
6. All dues for storage to be paid before the removal of the property.

Notice is hereby given that His Excellency the Governor General in Council has been pleased to authorize the Tolls levied upon property stored at the sheds at the Lachine Canal Basin, under Proclamation dated 21st August last, to be continued until further orders.

By command,
(Signed) J. W. DUNSCOMB,
Commissioner of Customs.

INSPECTOR GENERAL'S OFFICE,
CUSTOM'S DEPARTMENT, 28th October, 1846.

INSPECTOR GENERAL'S OFFICE,
CUSTOM'S DEPARTMENT,
TORONTO, 31st May, 1858.

Notice is hereby given that His Excellency the Governor General has been pleased by an Order in Council bearing this day's date, to order and direct that the storage of flour in the sheds at the Lachine Canal Basins at Montreal be, until otherwise ordered, governed by the following regulations, viz. :—

1. Flour shall be allowed to remain in the sheds for two whole days free of charge;
2. If kept there beyond two days or 48 hours, such flour to be liable to a charge of one cent. per day per barrel, for the first four days after the expiration of the 48 hours of exemption;

No. 25—*Continued.*NOTICE—*Continued.*

3. Should the flour be kept in the sheds beyond four days at one cent per day per barrel, it shall be liable to pay two cents per day per barrel for every day subsequent to the expiration of such four days ;
4. Any part of a day to be considered as one day.

By command,

(Signed)

R. S. M. BOUCHETTE,

Commissioner of Customs.

PRIVY COUNCIL OFFICE,

OTTAWA, 12th June, 1880.

On the recommendation of the Honorable the Minister of Railways and Canals, the Committee advise that the rates chargeable for the storage of salt at the St. Gabriel's Sheds, Montreal, under the authority of an Order in Council, dated 1st July, 1846, whereby such rates were fixed at one cent per bag per week, after the expiry of the first 48 hours, be now amended, and the rate be reduced to one-half a cent per bag per week after the first 48 hours.

The Committee submit the above recommendation for your Excellency's approval.

(Signed)

J. O. COTÉ,

Clerk, Privy Council.

TOLLS ON VESSELS TRADING TO LOWER PORTS AND ENTERING THE LACHINE CANAL AT MONTREAL HARBOUR.

GOVERNMENT HOUSE,

QUEBEC, 8th June, 1860.

His Excellency the Governor in Council is pleased to order, and it is hereby ordered, that from and after the date hereof, the following Rates of Tolls shall be levied upon Vessels trading to Lower Ports, and entering the Lachine Canal from the Harbour of Montreal, and on certain goods herein mentioned; said Vessels to be allowed 48 hours for discharge of cargo before the following be incurred; and said discharge to be made below the St. Gabriel Lock.

Class of Vessels.	Rate of Toll.
Steamboats measuring 50 tons and upwards, per Ton Register, per day of 24 hours.....	8 mills.
All other vessels measuring 50 tons and upwards, per Ton Register, per day of 24 hours.....	4 do
Steamboat measuring under 50 Tons Register, each day of 24 hours.....	40 cents.
All other vessels measuring from 25 to 50 Tons Register, per day of 24 hours..	20 do
All vessels measuring less than 25 Tons Register, per day of 24 hours.....	10 do
Coal, per chaldron.....	10 do
Salt, per 100 Minots.....	15 do
Iron of all kinds, per ton weight.....	15 do
Merchandise, as in Class No. 6 of the Tariff of Tolls on Provincial Canals.....	10 do
Provided always that the above Tolls be levied only on goods for consumption in Montreal, and on vessels trading with that Port.	

(Signed)

W. H. LEE,

Clerk, Privy Council.

CHARGES FOR WHARFAGE OF FIREWOOD ON WHARVES AND BANKS OF LACHINE CANAL.

- O. C., 7th August, 1860.—1. On the recommendation of the Honorable Commissioner of Public Works, His Excellency the Governor General in Council is pleased to order, and it is hereby ordered, that the Rates of Toll authorized by an Order of His Excellency in Council of the 8th June last, to be collected on firewood on wharves at Lachine and Lachine Canal, and lying between Wellington Bridge and Lock No. 5, and on wharves in Lachine Canal Basin, be, and they are hereby altered and changed, and His Excellency is pleased to order that in lieu thereof, the following Rates of Tolls shall be collected as herein mentioned, that is to say :
2. Firewood landed on wharves or banks of the Canal, or in boats, barges or other craft, occupying any of the basins between Wellington Street Bridge and Lock No. 3, 4 cents per cord, and for every day the wood is allowed to remain in either the Canal or Basin, or on the wharves or banks after the first five days, an additional charge of 4 cents per cord will be made.
- Firewood on bank of Canal between Lock No. 3 and Lock No. 5, and on wharves in Canal Basin at Lachine :

	Per Cord.
For receiving timber, &c., to include use of basin or wharf for one month.....	3 cents.
For each succeeding month during the season of navigation.....	do
For wintering in basin or on wharf.....	do

No. 25—*Continued.*NOTICE—*Continued.*

GOVERNMENT HOUSE,

QUEBEC, 27th January, 1862.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

On the recommendation of the Honourable the Commissioner of Public Works, His Excellency in Council has been pleased to order, and it is hereby ordered, that the provisions of the Order in Council of the 8th day of June, 1860, as amended by the Order in Council of the 7th of August following, respecting the Rates of Toll to be collected on firewood on wharves at Lachine, and the Lachine Canal and Basin, be and they are hereby extended and made applicable to the banks and grounds at Côte St. Paul and at Lachine.

(Signed) W. H. LEE,
Clerk, Privy Council.

GOVERNMENT HOUSE,

OTTAWA, 4th February, 1880.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

Whereas by Order in Council, dated the 8th June, 1860, authority was given for the collection of the following Rates of Toll on "firewood on bank of Canal between Lock No. 3 and Lock No. 5, and also on wharves in Canal Basin at Lachine ":

Per Cord.

For receiving timber, &c., to include use of basin or wharf for one month.....	3 cents.
For each succeeding month during the season of navigation..	do
For wintering in basin or on wharf..	do

And whereas it has been shown that at present great difficulty exists in the collection of monthly dues on firewood, and the abolition of these charges will facilitate business and add to the revenue; His Excellency the Governor in Council, on the recommendation of the Honourable the Minister of Railways and Canals, has been pleased to order, and it is hereby ordered, that the clause of the Order in Council of the 8th June, 1860, under which said charges have been payable, be and it is hereby cancelled, such cancellation to take effect on and after the 1st day of July, 1880.

(Signed) J. O. COTÉ.
Clerk, Privy Council.

THE CANAL BASINS WITHIN THE CITY LIMITS OF MONTREAL TO BE CONSIDERED AS PART OF THE MONTREAL HARBOUR FOR CERTAIN PURPOSES.

GOVERNMENT HOUSE,

OTTAWA, 8th August, 1878.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

1. Whereas the Honourable the Minister of Public Works has represented: That under existing regulations for the collection of Canal Tolls, eastern bound vessels having paid the charges one way in full through the Welland Canal, are chargeable one section Canal Toll if re-entering the Lachine Canal;
2. That vessels loaded with grain destined for the Montreal harbour frequently unload only part of their cargoes on board sea-going vessels in that harbour, and re-enter the Lachine Canal for the purpose of unloading the balance of their cargoes either in elevators or mills located along the canal basins;
3. That in his opinion those vessels having paid the charges one way in full through the Welland Canal, should be allowed to re-enter the Lachine Canal free of Tolls, for the purpose before mentioned.
4. Whereupon His Excellency in Council, on the recommendation of the Honourable the Minister of Public Works, has been pleased to order, and it is hereby ordered, that the canal basins within the city limits be considered as part of the Montreal harbour, in so far only as regards the collection of Tolls on the class of vessels above referred to, which re-enter that portion of the canal for the purpose of unloading the balance of their cargoes, but that the same shall not apply any further, as in the event of vessels returning to the harbour to take cargo, in which case the usual Toll shall be charged against them on passing out of the canal a second time into the harbor.

(Signed) W. A. HIMSWORTH,
Clerk, Privy Council.

No. 25.—*Continued.*NOTICE—*Continued.*

GOVERNMENT HOUSE,
OTTAWA, 12th July, 1881.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

5. Whereas representations have been made by parties interested, showing that vessels laden with grain for delivery in Montreal Harbour, frequently carry also deck loads of phosphates, and that being compelled to proceed at once to the Harbour for the discharge of the grain, and pay tolls through to that point, subsequently re-entering the Lachine Canal for the storage of the phosphates, and, in accordance with the existing regulations, paying canal dues a second time for such re-entry.
6. And whereas a similar difficulty having been experienced with regard to the storage of surplus grain not required for shipment, an Order in Council was passed on the 8th of August, 1878, allowing re-entry free of Tolls for the purpose indicated; His Excellency in Council, on the recommendation of the Hon. the Acting Minister of Railways and Canals, has been pleased to order, and it is hereby ordered, that the Lachine Canal Baisins within the Montreal City limits be henceforward considered as part of the Montreal Harbour, for the purposes of the unloading of phosphates carried by vessels in addition to their grain cargoes, as above described; it being, however, provided that in the event of their returning to the harbour to take cargo, the usual Tolls shall be charged against such vessels on their passing out of the Canal a second time.

(Signed), J. O. COTE,
Clerk, Privy Council.

RATES OF CHARGES ON VESSELS WINTERING IN LACHINE CANAL.

GOVERNMENT HOUSE,
OTTAWA, 22 August, 1879.

Present :

HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL.

1. Whereas, the Honourable the Acting Minister of Railways and Canals has represented that by the Act 36 Vic., Chap. 128, a system of Measurement and Registration of Shipping was, for the sake of uniformity, adopted, which, by including portions of a Vessel exempted from Measurement by the "Merchants Shipping Act" previously in force, has very largely added to the nominal tonnage of Vessels, and that it has, accordingly, become necessary that the rates per ton formerly charged for wintering Vessels in the Lachine Canal should be altered to meet the new conditions of Measurement.
2. His Excellency, on the recommendation of the Acting Minister of Railways and Canals, and by and with the advice of the Queen's Privy Council of Canada, has been pleased to order, and it is hereby ordered: That the following wintering charges be, and the same are hereby substituted in place of the rates at present charged, viz. :—
3. For each Boat, Barge, Scow or other Vessel of ten (10) tons measurement and under, seventy (70) cents per vessel for the entire winter; and every ten (10) tons above the first ten an additional rate of eight (8) cents.

(Signed), W. A. HIMSWORTH,
Clerk, Privy Council.

CHARGES FOR WINTERING VESSELS IN RIDEAU CANAL.

CERTIFIED COPY of a report of a Committee of the Honourable the Privy Council, approved by His Excellency the Governor General in Council, on the 19th March, 1887.

On a memorandum dated 18th March, 1887, from the Minister of Railways and Canals, recommending that the winterage dues for vessels wintering in the Canal Basin at Ottawa, or other points along the line of the Rideau Canal, be fixed as under :—

In Canal Basin, Ottawa,	Steamers, per season.....	\$ 8 00
do do	Barges do	4 00
Inside Locks do	Steamers do	50 00
do other stations	do do	15 00

and further, that if he deems it advisable that authority be granted to take security from parties wintering these vessels in Locks against damage to Government property by fire.

(Signed), JOHN J. MCGEE,
Clerk, Privy Council.

RATES AND DUES LEVIED ON VESSELS LOADING AND UNLOADING IN THE NEW BASIN, LACHINE CANAL.

O. C., 26th January, 1883.—1. On a report dated 19th January, 1883, from the Minister of Railways and Canals, submitting an application dated 17th August, 1882, from the Montreal Harbour Commissioners, for the extension to the new Lower Basin of the Lachine Canal of certain powers of levying tolls conferred upon the Corporation by the Act 18 Vic., Chap. 143, in respect of the Lower Basin on the old Canal.

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